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NEW REDUCTION PROCESS AND MACHINERY.

The engraving upon this page of the JOURNAL OF MINING is a representation of machinery for the reduction of gold and silver ores, recently patented by J. A. Hitchings, of Denver, Colorado Territory. It is made up of several distinct machines through which the ores and their products pass and are consecutively treated. The machinery and process are thus described by the inventor:

Figs. 1 and 10 exhibit an improved stamp battery; its point can be seen in the drawing. It and Fig. 2 are covered in, to protect them from dust.

Fig. 2 is a pulverizer—a series of iron rollers, geared to turn in one direction, which reduce the ores to fine powder.

Fig. 3 is a circular fire-proof furnace, with lined flues and dampers. This patent covers also an inclined shaking pan, and the use of hot water therewith, not shown here.

Fig. 8, in the side of the furnace, is a retort, in which to treat amalgam.

Fig. 7, over the sluice, *d*, is a light iron cylinder, perforated at one end, to sow into the powdered ores deoxydizing powders previous to roasting. The patentee uses a cheap compound that effectually does this work on the worst ores, by using the after treatment therewith, herein practiced.

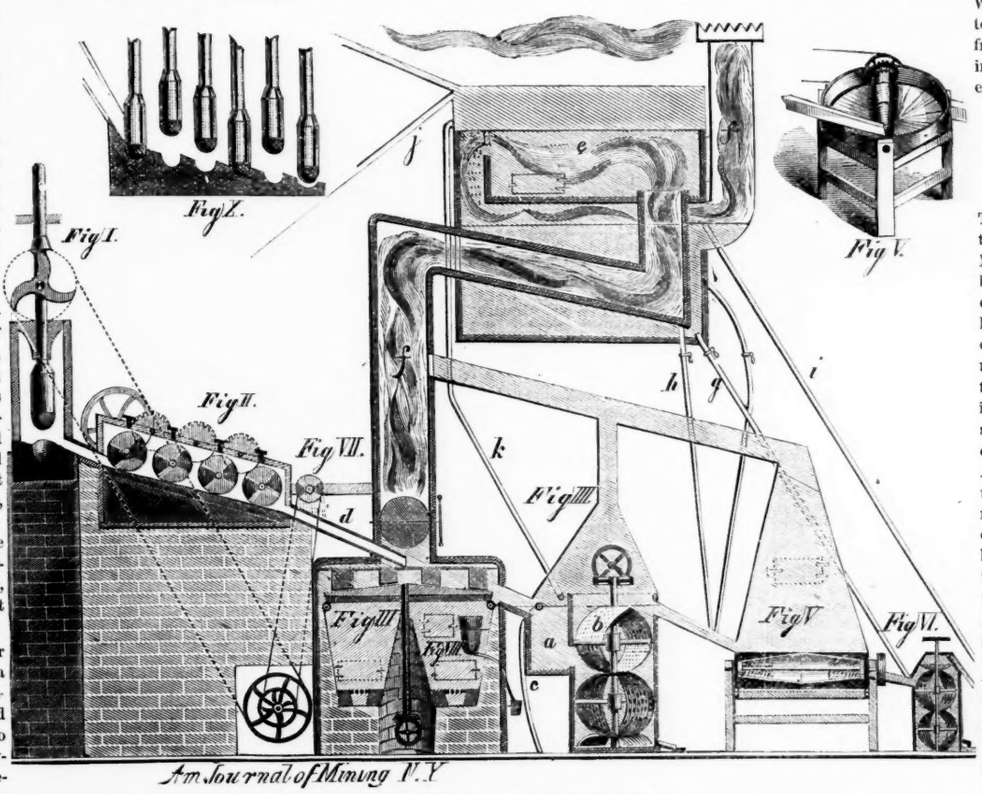
Fig. 4 is of two parts—a copper vessel, *a*, filled with cold water, and an iron amalgamator and screw stirrer, *b*. Mineral oil, the worst bane of amalgamation, is floated off by the waste pipe, *c*, and the contained copper is here separated from the ores.

Figs. 5 are different views of an improved arastra, where the ores are ground with quicksilver. This, and

Fig. 4 have dome casings and pipes to carry all vapors to the smoke flue of the furnace.

Fig. 6 is a caddy-shaped amalgamator of sheet iron, lined with mercury-coated copper plates, and provided with stirrer.

The smoke flue passes into a reservoir of water, Fig. 9, to a dry chamber, *e*, thence through a shower bath, ——, beneath the chamber, to the chimney, *f*, and the open air. This apparatus condenses flour-gold and mercury vapors, which are drawn off by the pipes, *g* and *h*; also sulphur and arsenic, which are taken by the door from the dry chamber. Waste water goes out at the pipe, *i*. Cold water is fed to the battery, when wanted, by the pipe, *j*, and to Fig. 4, by the pipe, *k*. Ores not treated by fire, pass from Fig. 2 to Fig. 4, direct. The capacity of such a machine as here represented is about equal to a twenty-stamp mill, and usual appendages; its cost about as much; weight about eight tons. All descriptions of gold, silver or copper ores can be treated by it, either wet or dry, with or without mercury, and with or without fire. Any of our readers desiring further information, can obtain it, by writing (and enclosing stamp) to Mr. Hitchings, 99 Bond street, Cleveland, Ohio.



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HITCHING'S IMPROVED REDUCTION MACHINERY.

The Gold Cement Claims of California.

As we predicted long since, those interests are attracting the attention of capitalists, and it is our greatest pleasure almost daily to learn of new developments, giving abundant promise for continued and active work. Our gold quartz interests are far superior to any known in the world, but the cement deposits proving so rich, seem to offer great inducements for surplus capital. Our young friend Kearsing has had several more tests made of the cement from his claim in Tuolumne county, giving most encouraging results—$458, $736, $1,071, $1,121, respectively, to the ton. Separate pieces were taken and worked, which may account for the difference between the minimum and maximum results. There is no portion but that will show largely in the precious metal. Until recently, no particular notice has been given to these deposits in Tuolumne county, but since they have shown their great value, we understand many locations have been made, and we hope their enterprise may be rewarded with claims that will richly recompense them for every outlay. We shall be glad to hear of tests from other claims in that county or elsewhere.—*Ex.*

Moulds for Casting Steel, Iron, &c.

Mr. Frederick Trachsel, analytical chemist, and Mr. Wm. Hall, brass founder, of Manchester, have patented certain improvements made by them in moulding for casting steel, iron, and other metals. According to the usual process of moulding for casting, it is well known that sand is employed, which is more or less siliceous, the silica of which, when submitted to the melting temperature of certain metals, becomes fused and combines with the said metal. This invention consists in substituting for the aforesaid sand, a material which does not substantially contain free silica, lime or other material which will fuse at the melting temperature of the metal to be cast. With this view, materials with an aluminous base, having been previously reduced to a state of powder, are employed in place of the usual sand, and after the ordinary manner of moulding. As illustrative of the invention, coal-shale or fire-clay, ground when dry to a powder, may be used as above described.—*British Exchange.*

Southern Coal.

The attention which is being paid to coal mining in Virginia, Carolina, Georgia and other Southern States, is very astonishing, considering the little attention which has been given to these pursuits previously. The Richmond *Enquirer* says that the natural and undeveloped wealth of the Great Kanawha

region "is wonderful. Its deposits of cannel coal, or splint coal and of bituminous coal, surpass all others now known for equality as well as quantity. Its salt mines, its iron ore, its fire clay, its timber, and withal its rich and fertile soil, make this region particularly attractive to capitalists. New river and Gauley river, Elk river and Coal river, are the chief tributaries of the Great Kanawha; and these five rivers drain the greater portion of trans-Allegheny Virginia." It adds that "leading capitalists in New York, England and France own large tracts of valuable coal and mineral land in the Great Kanawha region. The coal question in England and France is becoming one of magnitude. France gets its supply of coal from England, and such at present is the vast amount of coal taken from the English collieries for home consumption and foreign exportation, that the London papers assert the manufacturing interests are becoming uneasy about the exhaustion of English coal, the motive power to their factories. It is said at the present rate of consuming coal in Great Britain and exporting it to Europe, the coal deposits of Great Britain will be exhausted in half a century. Late coal statistics show that the exports of coal culm and cinders from Great Britain for the first four months of the current year reached 2,915,877 tons. In the corresponding period of 1865, the exports were but 2,674,049 tons. The increase has been principally in the exports to Russia, France, Spain, Italy and other continental markets, in consequence of the imminence of war. France took in the four months 576,471 tons, having taken during the corresponding period of 1865 but 501,630 tons." We are very well aware that Virginia, Tennessee, and some of the other Southern States, can become competitors with Pennsylvania in the course of time. They have the material. All which they need is labor and capital. The latter they will have by-and-by, though as agriculture is now and must long remain more profitable than mining, the latter will not soon reach the head and be as cheap as it is in Pennsylvania. We are glad to see that these States are turning their attention to mining, and that they are determined to do what we have done, and to grow by such means as have proved profitable in our case. They have hitherto sought merely those crops which lay on the surface, and have left the coal and iron to be developed by time and by fresh opportunities. They are now likely to look more thoroughly into the root of the matter, and we shall not be surprised to find both Virginia, Tennessee and Georgia striving to emulate Pennsylvania in the amount of their annual production. If they advance according as they have begun, no calculation can tell where they will end, or how much our national wealth will be augmented by means lying near at hand. The coal development of the Western States has also to be considered. They are doing what they have never before done, and are striving to advance their original welfare. Ohio, Illinois, Indiana and other States are at work. We can afford to welcome their efforts. The market is large enough for us all, and their supplies will only avail to build up local interests, without compromising our fortunes. And as all welfare is limited by this discovery and use of coal, we can safely enumerate a hope that the Southern and South-western States will grow from the moment when they make coal mining an important branch of their business. So far from opposing their efforts, we give them God-speed in all which they essay to do, and shall find no greater pleasure than in the fact that they are making themselves true rivals of Pennsylvania, and providing their several communities, as we know they can. Every one of these practical efforts is favorable to the future, and just in proportion as the States to which we refer develop their natural wealth we shall have coadjutors in the great occupation which is now more essential to us than any other.—*Phila. North American.*

The Miner.

BY JAMES RUSSELL LOWELL.

Down 'mid the tangled roots of things
That coil about the central fire,
I seek for that which giveth wings,
To stoop, not soar, to my desire.
Sometimes I hear, as 'twere a sigh,
The sea's deep yearning far above,
"Thou hast the secret not," I cry,
"In deeper deeps is hid my Love."
They think I burrow from the sun,
In darkness, all alone and weak;
Such loss were gain if He were won.
For 'tis the sun's own Sun I seek.
The earth, they murmur, is the tomb
That vainly sought his life to prison;
Why grovel longer in its gloom?
He is not here; He hath arisen.
More life for me where he hath lain
Hidden, while ye believed him dead,
Than in cathedrals cold and vain,
Built on loose sands of "It is said."
My search is for the living gold,
Him I desire who dwells recluse,
And not his image worn and old,
Day servant of our sordid use.
If Him I find not, yet I find
The ancient joy of cell and church,
The glimpse, the surety undefined,
The unquenched ardor of the search.
Happier to chase a flying goal,
Than to sit counting laureled gains,
To guess the Soul within the soul,
Than to be lord of what remains.

Mining Summary.

Michigan.

Geologists assert that Michigan has a coal field of 7,000 square miles; but a great abundance of excellent fire-wood has rendered Coal comparatively unnecessary for present use. As yet it is produced for market in only two localities. There are two mines in Blackman, Jackson county, yielding 24,689,143 pounds for the year ending May, 1864. and one mine in Caledonia, Shiawasse county, producing in the same period 2,400,000 pounds, making an aggregate or 27,089,143 pounds, or 338,614 bushels, of 80 pounds to the bushel. In 1854 there were but eight persons employed in Michigan coal mining—now there are 70; then the annual product was but 120,000 pounds, or 1,500 bushels. Now they mine 225 bushels where they mined but one bushel.....From the Portage Lake *Gazette* of Sept. 20th, we learn that the total August product of the district was 532 tons 1722 pounds. We mentioned [see p. 2., vol II., JOURNAL OF MINING] the August products of the Quincy, Hancock, Isle Royale, Grand Portage, and Albany and Boston products these are now given as follows: Franklin mine—mass, barrel and stamp,122 tons, 300 pounds; Pewabic mine—mass, barrel and stamps, 164, 115 pounds, or 82 tons, 115 pounds; Huron mine—mass and barrel, 108,106 pounds; stamps, 54,565 pounds; total, 162,671 pounds or 81 tons, 671 pounds. The product of the Cliff mine in July was 126¼ tons, and must have been about the same in August.....A friend writing from Rockland says: At the Mass mine there is a good show of copper; the lode is twenty feet wide with good copper all through it, and some large masses. We are now trying to take out one piece that I think will be from three to four tons. This is the last vein intersected by the cross-cut or vein No. 4.....Explorations have been commenced on Section Twenty-three, immediately adjoining the famous Calumet property, and the conglomerate has been exposed and found as rich in copper as on the adjoining property. The name of the new mine we have heard mentioned as the Hecla .....Rock is coming in from the Calumet at the rate of from thirty to thirty-five tons per day, and there is now delivered at the Portage Lake Smelting Works over four hundred tons awaiting the completion of the new blast furnace for smelting. The show in the bottom of the open cut and pit is said to exceed anything heretofore found, and appears to grow even richer as they get down.....The products of the Huron mine, as will be seen on reference to the returns published above, steadily increases, and has reached the respectable figure of eighty-one tons. Unless something extraordinary occurs, it may reasonably be expected that this month's product will fully equal if not slightly exceed last month's, and the October product be a "rouser." The new finishing machinery is all in place, and only awaits the arrival and setting of three or four gear wheels to be set in operation.....We learn from the deferred annual report of the Albany and Boston Mining Company, that the high expectations formed of the Albany and Boston property, based on the letters and reports of Mr. Hague, together with several conferences with him at various times, have not been realized by the year's workings. The expectations were, that the lode would average three or four per cent. of ingot copper from the rock stamped. The result is a product of 1.33 per cent.: about one-third only of what was anticipated. The discrepancy between expectations and results is accounted for by the facts that a great deal of poor rock between the copper belt and sandstone was necessarily brought to the surface, and owing to the use of of a large rock-breaker, great quantities of poor rock found their way to the stamps.....From the Ontonagon *Miner* of Sept. 22d we condense the following: The shipments of ore (in tons) from Marquette and Escanaba are thus reported by the company's agents:

	Week ending Sept. 21.	Prev'sly rep'rt'd.	Total.
Lake Superior Iron Co...	3,393	44,329	47,722
Jackson Iron Co.....	2,022	14,752	*16,774
Do. do			†35,138
P. & L. Angeline Iron Co.	1,954	18,143	20,097
Cleve'd Iron Mining Co...			*24,771
Do. do. do. ..			†12,937

*Shipped via Marquette. †Shipped via Escanaba.

The shipments of ore over the Bay de N. & M. Railroad to Sept. 15th, 1866, were:

Jackson Iron Company.....	16,929	tons.
Cleveland "	22,281	"
Marquette "	6,130	"
Lake Superior "	45,848	"
Pitts & L. Angeline	19,126	"
Edwards (P. & L. A.)	2,149	"
Washington "	13,487	"
New England "	2,669	"
Parsons "	3,371	"
	131,981	"
Pig Metal: to Sept. 15th.....	1,148	tons.

The known value of many of the mines on the Evergreen Range, whenever and wherever wrought on the course of their main lodes, is proverbial. Among these, there is scarcely an exception along the entire line, and the Aztec is well known to have held a prominent place. One point, near the summit of the southern escarpment of the bluff, was chiefly mined in 1851, '52 and '53, and with almost unparalleled results as to the quantity of copper raised. On visiting the mine the past week, we were not surprised to see arrangements making for re-opening the old works at this point. An engine, formerly in use at the Algomah mine, is being placed on the burrow for this purpose. Judging by past results, and by what may now be seen of the lode at various accessible points, we anticipate most favorable returns when work is resumed. The large course, a little south of this, on which the present mine is opened, is showing very well, but chiefly in stamps and barrel work, from which the present mill of ten heads is capable of producing, under favorable circumstances, a ton of mineral per month. With the western openings under way and properly managed, as they certainly will be, we think the Aztec will take rank with the other working mines of that range....At the Mass mine, the two masses removed from the "Champion" lode last week, are not yet weighed, but may be safely estimated at two and three tons each. Besides these masses, there are also some two tons or more of rich barrel work on surface, enough in all for a full charge at the Smelting Works. The air shaft is now about 10 feet in the rock, and is going down as fast as six first class miners can sink it....The August product of the National mine was about 35½ tons.... It is not at all surprising that they encountered a prime lode on the surface at the new No. 3 shaft of the Opina mine. Some ancient pits were known to exist in the vicinity, and they are sure indications of copper wherever found. They took out about 600 lbs. the first two or three days sinking. The lode is about 20 feet wide at this point, and a very promising show for mineral.....At the Minnesota, several masses came down this week from the stopes over the 6th, 7th and 13th levels, weight from half a ton to 3,400 lbs. each.....The largest mass yet brought down from the Caledonian mine came on Tuesday—weight 4 tons 400 lbs., quite pure, and cut on two sides.....The last piece of the Evergreen mass came down on Wednesday P. M. Its weight was 4 tons 135 lbs.....A correspondent of the Boston *Commercial Bulletin* writes: In the neighborhood of the Calumet mine are evidences of work performed by miners in ancient times. Who these miners were, and how long since they worked, there is nothing to show but the numerous hammers formed from large waterworn stones, large beds of charcoal, the remnants of fires built for the purpose of softening the vein rock, moccassin thongs of buffalo hide, and other relics, all covered by the soil upon which grow ancient forest trees. Whoever they were the knowledge they possessed was precise and accurate, for nowhere have the traces of their labor been discovered where copper-bearing veins do not exist. It is evident that the copper must have been transported to a distance, for in the mess-mines masses have been found exposed, from which portions had been taken off, but with no attempt, excepting, in one instance, to remove them entire, as would have been the case had it been intended to use them at any near or convenient point. In most cases surface openings only have been found, but in one or two instances regular mining operations appear to have been carried on, shafts sunk and levels driven sixty or seventy feet below the surface. The first discoveries in the Calumet were made in one of these ancient pits, the extent of which gave occasion to believe that something of importance might be found. At this point the soil is sand and covers the rock to a distance of about ten or twelve feet. While removing it quantities of stone hammers were found, with beds of charcoal, besides various Indian relics, moccasin thongs of buffalo hide, &c. Large beds of carbonate of copper were discovered in the soil before reaching the vein rock, showing that there masses of copper had formerly existed. Boulders, detached from the vein rock, were also found partially exposed on the surface, and containing a large per centage of mineral. One of them, weighing more than two tons, was broken up and formed a part of the first lot smelted, which yielded 21 per cent. ingot copper. When the vein was exposed it was found to be a conglomerate rock, filled with copper, not in masses but thoroughly impregnated, which, on smelting, proved to contain from 15 to 20 per cent. pure metal. An idea of its astonishing richness can be formed when it is remembered that 4 per cent. is usually considered an extraordinary return. In half an hour after the first trial of stamping was commenced, it was estimated that there was half a ton of copper stamped out of the rock, and in fifty-five minutes one ton of 80 per cent. mineral was obtained This was the largest yield ever returned in stamping since the commencement of operations in this country. During the past winter this pit was sunk to the depth of 29 feet. The character of the ore is different from that of any other in the country. In July last various buildings were being put up, costly machinery was already on the ground, and roads were being completed to Torch Lake and Hancock. Travelling towards the latter place we reach the Dover mine, upon which $20,000 have been expended, the only visible results being a few comfortable log houses, a blacksmith shop and one or two abandoned horse whims. We next pass the Rhode Island, upon which $100,000 have been expended. We now come to the Albany and Boston,

the location of which was set off as a dividend by the Mineral Land Company in the year 1860. In the winter of 1863 to '64 fifty tons of ore taken out of the trial openings were crushed at the Huron Stamp Mill, and were found to contain 7 or 8 per cent. mineral. This flattering result encouraged the wealthy proprietors to prosecute the work with great vigor, and as a beginning a series of Blake's rock breakers were used preliminary to stamping with a set of Gates' stamps. It was now, however, found that the rock yielded less than 2 per cent. During the present summer the expenses on the mines have been greatly reduced; they had, however, already consumed $615,000. There has been a change in the management, and at present it is said that the produce more than pays expenses. Next to these, is the St. Mary's mine, work upon which has been suspended during the past two years after an outlay of $110,000, Next comes the Edward's and Dorchester mines, upon which $32,000 and $30,000, respectively, have been sunk.

Montana.

.... The Virginia City *Democrat* of Sept. 6th says: We learn that times are very brisk at Silver Bow and a good deal of gold is being taken out. Rocker City, in two miles of Silver Bow, is full of miners, and all doing well. Highland, twenty miles distant from Silver Bow, is a new gulch, and there is a stampede to that place. The diggings are said to be rich, and fully 1000 miners are there opening and working claims, which are yielding big money. There is new life in the neighborhood of these diggings, and all who have claims hold them at a very high price. .... The Virginia City *Post* of Sept 8th contains the following: The Alamed lode was discovered in 1864, by Messrs. Crawford and Farron. At that time, Mr. Gilbert assayed a ton of the quartz, which produced $2,250 in gold to the ton, and there was silver in addition to this. A tunnel about one hundred and fifty feet in length has been excavated in the side of the hill, which is chiefly composed of rock. A shaft has been sunk to the depth of twenty-five feet. Every analysis that has been made shows that this lead promises to equal, if not surpass, the richness of the celebrated Comstock mine in Nevada. It is located about two miles west of our city, and we understand that a mill will be erected upon it in the course of a few months. .... From Mr. W. J. McCormick, we learn that diggings have been struck between his place and Helena, on a branch of Fish Creek, in the Silver Star district. Prospects have been obtained which go to show that the gulch is the richest discovered since the discovery of Alder. Mr. Nat Davis started for the new Eldorado, yesterday, and from him we expect to learn more about its richness and extent. .... Dr. Hopkins, who is largely interested in quartz in the Bannack district, came into town on Wednesday last, and from him we learn that the Dacotah No. 4, in that district, is now developed so thoroughly that there is not a probability of a doubt but that the stockholders will receive heavy dividends in the future. The shaft on this lode has been sunk to the depth of three hundred feet, and is now one hundred and fifty feet through, and below, what is thought to be the cap rock. The crevice at the bottom of the shaft is from five to ten feet in width. The Butterfield and Hopkins mill, which is located on this lead, has been operating very successfully for some two or three weeks past, and there are still forty cords of rock ready for crushing, which the Doctor thinks will make a great many little gold brick. .... A letter from Highland district, Deer Ledge county, Aug. 28, says: The gulch is turning out very well as far as prospected. On the discovery claim, one week ago, the discoverers took out a nugget weighing thirty-four dollars and twenty cents, and have, on an average, one dollar to the pan since that time. On number nineteen, they have, on an average, three dollars to the pan; and on number seventeen, they beat the discoverers by taking out one nugget weighing thirty-six dollars, lacking twenty cents, and another weighing twelve dollars. On every claim where they have struck gravel, they have obtained prospects of from three to twenty-five cents to the pan, and not down over eight feet. I write you this note because several persons who came here were disgusted, and thought it was another Elk and Bear gulch; but such is not the case. I think, as well as others, that this gulch will turn out as good as even old Alder creek did—in proof of which we have taken out larger prospects than ever were taken out of Alder. I do not wish to run down the Alder creek diggings; but that is our criterion. Our quartz leads here are not to be beaten in the country. Out of a piece of rock no larger than a hazel-nut, we have obtained one grain and a half of pure silver; and there are two gold leads that you can wash out one hundred colors to the pan, in the crevice. .... A letter from Bannack, Aug. 29th, says: The Limhi stampede is at an end. It turns out that the new diggings will not pay much over wages, yet some are preparing to mine and winter there, but most have returned to Bannack to pursue their legitimate business. Our streets are not deserted, but every day adds to the progress that is being made in our mining and business affairs. The resources of this portion of Montana are unequalled. Everything that is needed for mining is here in abundance. Wood and water, fire, and common clays abound, and the leads of gold and silver here, at Rattlesnake and Bald Mountain, are unsurpassed by any, and the men are at work who will, ere long, prove my opinions to be based on sound reason. A train of ten wagons, arrived this evening with Prof. Eaton's outfit for mining purposes, for the New York and Montana Mining and Discovery Company, consisting of three complete sets of furnaces, one iron foundry, and tools and lathe for a machine shop. Prof. Eaton is the superintendent of this company, and has everything ready to put up the furnaces at once. He has manufactured fire bricks of very superior quality and good common bricks; and all his material is ready, besides having plenty of good ore to smelt. He has, upon an average, not less than fifteen men employed in mining and preparing to put up his furnaces. .... The Helena *Republican* states that large deposits of coal have been discovered on the Dearborn, near Paul Vennette's, and about forty miles from Helena. It lies in the form of a ledge, which is three or four feet in width. It is well known that the Upper Missouri could not be navigated many years, on account of the lack of wood upon its banks. This bed, in addition to those which are already known to exist, will supply the boats with fuel and make steam. .... A letter from Helena, Aug. 27th says: The miners in this vicinity, are doing well, and in a number of small outside gulches, the stuff is found in paying quantities. Mitchell's gulch, near Montana City, is prospecting from twelve cents to two dollars and a half to the pan, and sluicing will be commenced there in a few days. The bars on the Missouri river are also reported rich. The big ten-mile ditch, about sixteen miles long, will be in a condition to supply this town and environs with water in a few days. .... The Helena *News*, of Sept. 1st, contains the following. Without any design to influence the mind of or to give this territory importance beyond its real merits, we believe that it is the richest mineral region in the world. The vast number of gold and silver lodes; the only tin lode or mine ever discovered in North America; the purity and richness of the copper ore; the vast bed of saltpetre discovered on the Madison; the stone coal near Benton and the Madison river; the fine building rock and marble quarries in different parts of the territory; the navigable rivers heading within our limits, capable of carrying on a commerce to and from the great oceans of the globe—all these must eventually make this one of the greatest and wealthiest States of the Union. It is true, our quartz lodes are but partially developed; but when the necessary enterprise, labor and capital shall have been expended in the work, all our anticipations will be more than verified. The great wealth of this country is to be found in the partially developed and undeveloped lodes that intersperse its whole extent. Mills and machinery, men of science and skill, of means must do this work. It has already been commenced. There are now probably forty miles or more already erected or in the course of erection, and there is room for four hundred. As the country improves, as living becomes cheap and labor reasonable, the mineral wealth will become developed. .... A "Montana Boy" writes from Confederate Hills, Aug. 20th: Immediately opposite New York, on Trout Creek, is the newly laid out town of Brooklyn, fast growing into importance from the number of mills erected for the reduction of quartz. Messrs. Simpson & Co's thirty stamp mill will be completed, it is thought, and running by the first of September. Messrs. Wessel & Wilk's six stamp, to be propelled by water power, will be set in motion by the 25th of the present month. Two arastras have been at work, and the results, so far as I can learn, are flattering; two others are in process of erection and soon will be completed. The all-absorbing topic of conversation in New York is quartz. The quartz malady seems to be a general thing among all classes—old and young—men have been seen wandering over the highest mountains and hills, like Jeptha of old, with pick and shovel in hand, their eyes cast upon the ground, searching for something—the wall-rock of a well defined quartz lode. Their slumbers are disturbed by visions of the auriferous and argentiferous metals seen in well defined crevices, and unparalleled in richness, but wake to find their air castles vanished, themselves only poor prospectors—victims to the phantom of the imagination. Others, whose delirium is of longer standing—see, hear, and talk of nothing but quartz. In regard to the leads in the vicinity of Trout Creek, in number, quality and richness, it is not necessary for me to particularize; suffice it to say, those I have visited show out well, many with native gold, others silver, galena, and the base metals. Placer mining in New York gulch is about as it was three months ago; scarcity of water is much complained of, and necessarily retards mining operations. In Kingsbury and Oregon gulches, a few sluices are at work; so far but little money has been taken out. Along Cave and Mag-pie gulches I have noticed quite a number of men at work, and the claims are paying something over wages. .... Thos. J. Fay writes from Deer Lodge, Aug. 20th: The great Salmon diggings are situated on a tributary of Salmon River, called Nappies Creek, (the Bannack for gold,) about 160 miles in a S. S. West course from this place. This Creek is about thirty miles long, running through a sort of basin, in which the discovery was made. They prospected the creek for several miles, and report them, so far as prospected, 6 or 7 dollar a day diggings, There are several small bars—Tompkins, Muc-a-muc, Billy Whistleknocker, etc., etc., averaging from one to two dollars to the pan, which can be easily worked, not having to convey water over 100 yards. Also, several gulches—Bear, Track, Smith's, and others, prospecting about the same as the main creek. When my informant left, there were about 60 men in camp, the balance having given up in disgust, some going to Boise, Warren's Diggings, Arizona, and a great many to Montana, determined to spend the winter and give the country a thorough test, feeling confident that they will yet be well rewarded. There are some 60 claims taken up above discovery, which is about one and a half miles from the head of the Creek, and about 200 claims below.

Idaho.

The Portland *Herald*, of August 25th says: The tunnel diggings lately found in Idaho have stimulated all those with capital enough to purchase their supplies, to commence prospecting on the numerous hills and bars for like diggings. A large number of these enterprises have already been crowned with success, and others promise equally good results. These discoveries have completely revolutionized the business of mining in Idaho, and all have gone to work with renewed vigor, well satisfied that their labors would be crowned with success. Placerville, one of the first camps discovered, and the first abandoned, is again settling up, while the numerous bars and hills about it are unfolding their hidden treasures in greater quantities than ever. The famed California gulch hill, which has already yielded its hundreds of thousands, is now tunneled under, and diggings richer by far than those on the surface, are now being daily worked. .... "Mining progress," says a correspondent of the *Tribune* writing from Owyhee, August 26th, "is very flattering. Many discoveries have been made in this month. On War Eagle Mountain two Germans have discovered a ledge of excellent rock. Nearly one year ago, they commenced search for it by observing the large quantity of rich "float" quartz in the vicinity. They did not have a cent to begin with, and during the whole period of prospecting they supported themselves and kept their tools in repair by pounding the gold out of the "float" quartz in a common hand-mortar, and amalgamating it in a common gold-pan. They were confident of the existence of a valuable vein in the vicinity in which they found it. It is astonishing to go and view the shafts sunk, cuts and tunnels excavated by these faithful and patient men. Just think of miners procuring all expenses out of loose, sunburned rocks that would scarcely excite the curiosity of a geologist, and do this for nearly a year; live in a common tent, do their own cooking and washing, and the reader can in a measure appreciate or understand the privations and labors of those who find and exhume the precious metals. These men, many of them refined and ambitious, deprive themselves of every luxury and association which they crave to make life desirable. It is a life of the most absolute self-denial. None but real actors—like myself for years—in this department of industry, can nearly understand the hardships of the pioneer miner. I have noted development of the Poorman, and can safely challenge the world to show its equal discovered. Many deemed it a surface pocket, but the main shaft is down 150 feet, and solid flakes and chunks of silver as plentiful as ever reported. In the north shaft, which promised little at the surface, the quartz is much decomposed, and is perfectly yellow with free gold; while at the south one (over a hundred feet distant) pure silver and sulphurets of silver are abundant. At intermediate points pure gold and silver are found in the same piece of ore. As far as the ledge has been opened, it meets the expectations of the most enthusiastic. The Cosmos company have recently purchased a ledge of immense value that was discovered in 1863, but not enough labor expended upon it to give it note, save upon the County records. It is situated on the same slope of War Eagle with the Poorman, and is called the "Silver Cord," though it should have been named "Golden Cord." So far as prospected, it yields bullion worth $8 to $10 per ounce. Twenty-five thousand dollars was paid for 600 feet, and I venture the assertion that the ledge will have paid for itself and current expenses in six weeks from the day of purchase. In some of its features, it resembles the Poorman, and I believe is of the same family of veins. It has considerable decomposed quartz that will yield from $\frac{2}{3}$ to $\frac{1}{2}$ ounce of gold to the pound. The ledge averages fully 2½ feet between solid casings, and contains a continuous gold belt of 10 inches in width, in which free gold is visible in every pound of ore. Other very rich developments are reported, though I have made no personal inspection of them. My misfortunes in mining have instilled in my mind a spirit of caution and unbelief in mining reports, particularly where they are highly colored; but a careful examination of Owyhee quartz has greatly revived the old spirit of '49 and '52. With all this prospective wealth for our whole country,

and Owyhee in particular, the population is discontented and unsocial. It is composed of contributions from all nations, and of all grades of mankind, and all intent upon accumulating a fortune.

Georgia.

A correspondent writes from Dahlonega, Lumpkin county, Sept. 13th, to the *Times*: "Vein mining" is the type of the gold disease which is now most prevalent, and hitherto very little known in these parts. It is now very prevalent and active, developing itself in an irruption of machinery and in the most daring liberties with the streams and watercourses. The Jones vein, about six or eight miles north of Dahlonega; the Pigeon Roost vein, upon which Mr. Pride's company are making great preparations to operate, between three and four miles south-west of this place, on the west side of Cane Creek, near the road leading to Auraria; the "Battle Branch" vein, one and a half miles southwest of Auraria, on the Etowah river; the 1,052 and 1,031 veins, so called from the numbers of the lots on which they are situated, about one mile from Dahlonega, on the Yohoolah Creek; the Rutherford vein, two miles northeast of Auraria; and the Griffith vein, one mile south of the Rutherford vein—are the spots where gold is said to be most abundant, and where capital, skill, and enterprise are about to be employed to add it to the available wealth of the nation. There are other veins, said to be very rich, in Forsyth county, thirty miles southwest of this place, belonging to the Rutherford Brothers and Mr. Roberts, and the Franklin vein, which belongs to Mr. Dearing; and there are others near Acworth, Marietta and Alatoona, on the Western and Atlantic Railroad. These veins are in the Gold Belt proper, but there are still others outside it in Habersham, Hall Hart, Columbia and Carroll counties, of the value and productiveness of which many encouraging stories are told. I have named above the principal veins which have most fame and most promise, but there are a number of others called after the persons owning them, such as the Lewis, Wood and Lord's mines, which are being worked, and with a fair prospect of great success. The gold in these veins is mostly found imbedded in sulphuret of iron and quartz—sometimes in quartz only, and sometimes, but rarely, in slate. The veins, as I have already remarked, run parallel with the formation of the country, which is northeast and southwest, corresponding with the Alleghanies. Eighty feet below the water level, and about one hundred and forty feet below the spot where the first gold was found, is the greatest depth that was reached by those who first essayed vein mining; therefore experienced miners, who have been accustomed to mines 1,000 or 1,500 feet deep, confidently believe that, with proper machinery, and all the necessary appliances, the idea that the Georgia gold mines are all "pockets," will be exploded. Hitherto, also, the mode of extracting the gold has been of the rudest and most simple, and it is believed that by the introduction of the smelting process, the per centage of gold per bushel will be more than doubled. Extravagant advocates of the smelting process assert that it will yield forty times as much gold as by the best known system of amalgamation. From what I have seen and heard, I think there can be but little doubt as to the existence of gold in vast quantities in these veins, and that when sufficient capital and skill are brought to bear to work them, they will prove amply remunerative. Squatters, with a shovel and a tin pan, now succeed in picking up the gold of other people, and in supporting themselves and their families by this dishonest industry. I purposely abstain from communicating any of the tales which I have heard of the comparative richness of these veins. I have invariably found that the very richest in reputation are those which the owners wish to sell, and I am therefore slow to credit their representations. The only mines for sale concerning which I should implicitly believe all that the owners say, are the Rutherford mines, which belong to the Professor of Mathematics in the University of Georgia. They are certainly rich, and are in the market because the Professor is unable to work them, and does not believe in the success of individual mining. He is a most worthy man to whom undeviating truth is second nature.

Arizona.

The La Paz (Arizona) *Gazette*, August 16th, says: At present the copper mines of Arizona are attracting abroad more attention than the deposits of more precious metals. At Williams' Fork, on the Colorado river, many valuable copper leads are located and a great deal of work has been done .....The Yuma Mining Company, incorporated in San Francisco in March last, with Gen. Irwin McDowell, Maj. R. W. Kirkham and George F. Hooper as trustees,) with a capital of $200,000, will soon commence operations for hydraulic mining on the Gila, about 20 miles from Fort Yuma.....A correspondent writes from Prescott July 23d to the *Alta*: Several of the mills are in operation and doing well. The Woolsey Water Mill, on the Agua Frio, twenty-five miles east from here, is running five stamps, and although defective in some particulars, is likely to render good service. There is an abundance of water, and the driving wheel is fifty feet in diameter. The ore used is from the Central and Ticonderoga lodes, distant some five miles from the mill, and thus far it has returned from $50 to $100 per ton. The lodes are very large, and there would seem to be no end to the ore. The Sterling Mill, five stamps, upon the Sterling lode, five miles south of Prescott, has been running for two weeks past, and is said to work finely. The ore has thus far paid from $30 to $50 per ton, and the shafts and tunnels show a quantity of rock, better, it is said, than any yet crushed. The Sterling ore has much free gold and thus far shows no sulphurets. The lodes on Lynx Creek, ten miles east from here and one of the richest districts, all show sulphurets, and most of them at a depth of fifty feet indicate a change to silver. The Eureka, one of the most noted mines, shows a greyish black rock at sixty feet, which many think it will be difficult to work. Fried in the horn-spoon, after roasting, it never fails to show gold. Mr. Cummings, one of the proprietors, will go to San Francisco in a few days with some hundreds of pounds, in order to secure a thorough test, and learn the exact process requisite to its successful working. The Colorado miners here insist that the Lynx Creek ores are just like those of Colorado, and think the Lyon process will be the only one suited to their reduction. Mr. Lamson's two Thunderbolt mills are here. One will be in operation on Lynx Creek early in August, and, if necessary, arrangements will be made for working silver as well as gold quartz. At forty feet the shaft on the Florence lode, near the mill, and the ore from which Mr. Lamson proposed to work, shows silver rock—a six foot vein—some of it fit to compare with that of Washoe. Messrs. Curtis & Noyes, of the saw mill here, have agreed to put a mill on the Umpqua gold lode, about eight miles south from Prescott, on the Hassayampa. It is said they are to have 1,500 tons of ore to crush at $20, and the same amount at $15, which ought to pay very well; for as nearly as I can estimate, it will not, at the outside, cost over $10 per ton to crush ore in this well-wooded and watered part of the territory. Mr. Vickroy, who brought a mill here for some Philadelphia parties, in 1865, has returned, and with him a Captain Coffin, formerly of the army of the Potomac, who will assume full charge of the mill, and, it is hoped, put it in operation without delay. It is a good mill, of the old fashioned sort, and there is general regret that it has been idle to this time. Captain George A. Johnson, of Fort Yuma, has made arrangements with Mr. Groom, and others here, to send up a five stamp mill, to be located in this vicinity. It will be put upon the Sterling, or some one of the promising lodes near to it. The Borger mill, in which Wormser & Co. are interested, is rapidly approaching completion, and ores from the Big Bug and Galena lodes, in the Big Bug district, are ready for it. It is, perhaps, the best fitted of all the mills brought here to this time, and the district is one in which we have great hopes. This brief allusion to milling movements here, which is by no means complete, will serve to show that we are moving forward; that the Apaches have not dismayed our quartz owners, and that we shall soon know the exact value of our ore.

California.

Placer.—The Placer *Herald*, of September 8th, says: The mallet vein continues to bear a great deal of sulphurets. Some of the rock was recently worked by mill process and yielded $76 to the ton. As to richness of the quartz veins about Auburn it is now a fixed fact, and quartz miners are confident of making their fortunes.

Alpine.—The Monitor *Miner*, of September 1st, says: An additional force was this week put to the work of getting out and assorting ore from the Morning Star mine.... The furnaces for the Davidson mill are well under way, the superstructure and furnaces proper being finished and the main flue or chimney more than half completed. The height of the whole will be 48 feet, and it is being built in the best manner. Prof. Kustell, we understand, is now at Virginia City, and will be here with skilled hands to attend the furnaces very soon.... The Mowyer tunnel is to be run from this on until the ledge is cut with an increased force. Water is now coming in at the face, and the sound of water ahead gives hope that the lode is near at hand.... In Silver Mountain district the ledge of the Washington is understood to be improving in size and quality. The Montana tunnel is being pushed ahead. The Lady Elgin company, owning on the Kohinoor lode, are about letting a contract for seventy-five feet of tunnel. The Silver Mountain, Buckeye No. 2, Maine and Pennsylvania companies are at work making usual progress.

Nevada.—The *Transcript*, September 5th, says: The company owning in New York Hill, Grass Valley, are taking out magnificent rock from their mine. We saw some sulphuret rock yesterday, which will compare favorably with ore from any mine in the county. This company have a large amount of ground.... The Ancient River Blue Gravel company has located between five and six miles of ground, in Little York Township, on the extension of what is known as the Stranahan ground. These two companies claim the mountains under which the ancient river bed is supposed to be located, from Chalk Bluff to Bear Valley. The theory of the parties locating these claims is, that the great channel made its way from the Sierras, through Bear Valley and under the mountains, being buried by the upheaval, from four hundred feet to a greater depth below the surface. They claim that with few exceptions, the channels of blue cement yet found are only side-washes for the main channel, and that the source of these washes will be found far richer than the channels fed by it. It is needless to say that if the theory of these men, who are practical miners, is correct, the cement claims have not begun to be developed yet. Many practical miners are strong believers in this theory of Stranahan.... An exceedingly rich ledge was struck near Allison's ranche on Saturday, August 18th. The vein is six inches wide, and is nearly one-third gold. It is called the "Red, White and Blue."..... The Grass Valley *Union*, of August 30th, says: The Washington ledge on the Ben Franklin Hill, is looking better than ever. An interest of one hundred feet was sold during the present week for $1,500 cash, and the trade is here regarded as an excellent one for the purchaser.... The *National* says: The ledge was struck this morning in the northern extension of the Ophir mine on Ophir Hill.... The old shaft, in the Ophir, which is now nearly six hundred feet deep, is yielding some beautiful rock, most every piece containing more or less gold visible to the eye. The new shaft is now some three hundred and twenty-five feet deep, and is producing some very pretty rock.... At Osborne Hill, Woodworth & Co. are now down on their ledge about three hundred and forty feet. In the incline rock is now being taken out ore which yields about $115 to the ton.

Nevada.

The San Francisco Stock Broker's Circular of Sept. 8th says: Hale and Norcross is still firmly held, and no sales transpired in the Board the past week. It is now quoted at $1,650 bid, $1,750 asked. Various portions of the mine are looking exceedingly well, but no new developments have been made recently..... Savage steadily advances from $1,075 to $1,130, b. 30 receded to $1,115, then sold at $1,135, closing yesterday at $1,160, bid. During the week ending September 1st, 1,011 tons of ore were extracted, and 930 tons shipped to mills; leaving 626 tons on hand. The approximate value of the above 1,011 tons is estimated at $45,155, cost of extraction $8,736, and reduction $23,414; leaving an estimated profit of $23,014. For the month of August the actual profits of the mine are stated to be about $100,000. In making the above estimate, 2d class ore is valued at $55 per ton, and 3d class at $35. The south drift, in the Curtis shaft, is penetrating unprofitable spots of ore. The Superintendent's report says: "the ground is hard both with us and the Hale & Norcross, so that it will probably take three weeks to connect." The Atchison mill now reduces about 45 tons of ore per day.....Crown Point has receded from our last quotations, and a few feet changed hands at $900 and $880. For the week ending Sept. 2d, 605 tons of ore were extracted from the mine. The drift south, on the 300-foot level, and the north, middle and south winzes, are looking well. The drift from the 400-foot station is now in 213 feet, still leaving 200 feet to penetrate before striking the vein. The suit of the Kentuck *vs.* this Company has been settled for the sum of $20,000.....Gould & Curry has met small sales the past week, and at the close is held at $710 per foot. The official figures give the receipts of bullion for the month of August at $134,395 23. The incline from the 2d to the 4th station has not yet been completed, and not until then will a thorough search be instituted to ascertain the quantity of ore in the rich seam lately passed through. .....Yellow Jacket has been more actively dealt in since our last report, over 200 feet changing hands, advancing from $772½ to $790, receding to $775, rallied again to $790, then sold at $749*a*757½, closing yesterday at $770. In the absence of official reports, a telegram, dated September 3d, says: "Mined 9,300 tons last month; and gross yield, $390,000." This is for the entire month of August, and gives an average of a fraction less than $43 per ton. This, it is thought, will leave a net profit of nearly $20 per ton. .....Ophir has met with a light decline, opening at $210, receding to $187, then advancing to $195, and closed yesterday at 210, b. 80. A contract has been let by this Company to sink the shaft to a further depth of a hundred feet, in order to get at the body of ore below the 9th level, opened by means of a winze. In the 7th level a body of ore has been found which promises well—1st class paying, it is thought, $200 and the 2d class $70 per ton. There are about 700 tons of ore now at the company's Washoe works and mine, which, it is believed, will yield about $70,000 bullion. The working expenses of the mine, heretofore quite heavy, have been very materially reduced, and the receipts for the month of September will be larger than usual.....Chollar Potosi has exhibited considerable animation the past week, and some 200 feet were sold; opening at $130, s. 60, advancing to $135, then dropping to $130, again selling at $135, and closing yesterday at $136. During the week ending September 1st, 478½ tons of ore were shipped to Custom mills. The several stations of the mine present no new features requiring special attention. We have it from a reliable source that no assessment is thought

of at present, as a rumor would have it last week. .....Imperial has advanced a trifle selling early in the week at $96, advancing to $100 and closing at 96$ bid.

Colorado.

The Central City *Register*, September 18th, learns from Capt. W. H. Morgan, who has just returned from an extended prospecting trip in the mountains southwest of the South Park, that he has found very rich silver and copper bearing ores. The copper ores are very rich, large masses of almost pure copper lying exposed to the surface, and nuggets of pure silver being found by panning in the gulches.... The Black Hawk *Journal* says: We understand that Lyon & Co. are putting up one of the patent Swansea desulphurizing furnaces of which Prof. Hill spoke to us when here last. He said a furnace would desulphurize 40 to 50 tons a day with no fuel except the sulphur in the ore, of which there must be 18 per cent. This is far below the percentage in the most of our ores. Mr. Bell had made the fire-brick, but they were of peculiar shape and were broken to pieces coming up. So he brought up some clay and burned them here, and they are being laid up at the smelting works. Elsewhere the same paper says: Since the opening of the present season, freights have receded so that it is possible to transport matt to New York by the quantity for $100 a ton, or to Swansea in Wales for $200. An arrangement has been made with Mr. B. Hermann, or through him with Vivian & Sons to purchase the matt made at these works, or to separate the copper and bullion for Lyon & Co. In the manufacture of matt no flux except quartz is required. This obviates the necessity, which existed in the process heretofore used, for lead or litharge, iron, tin, charcoal, and other fluxes, and bones for cupelling. The reverberatory furnaces at the works are precisely like those at Swansea, adapted to this new use, for which indeed, they were originally intended. Their united capacity is estimated at 15 tons a day. Matt is not considered at the shipping point until it has been enriched or concentrated to contain 60 per cent. of copper. As to the amount of ores which will make a ton of matt of this richness in copper, of course retaining or containing *all* the bullion of the ores, it will vary largely in the case of different mines. Mr. Johnson thinks that 4 tons of selected copper ore from the Bobtail will make a ton of matt. Gregory ore contains about 9 per cent. of copper, so that it would require 6½ tons of Gregory ore to make a ton of matt. In all ores the quantity would be increased or diminished according to their richness in copper. Matt is worth, now, saying nothing of its bullion, $6 for each one per cent. of copper. So that regular matt, (60 per cent. copper) is worth $360 a ton for its copper. The bullion again varies according to the richness of the ores, from about the same value per ton as in copper ($360) to perhaps twice as much. A ton of Bobtail matt is worth in the neighborhood of $1,000. Matt might be separated here as well as anywhere, but that they have a secret process for doing it at Swansea, so much cheaper than any known outside of them that they have monopolized the business. They can afford to make it pay copper miners to send their ores to them, or manufacturers of matt to sell to them rather than try to separate the copper and bullion themselves. Mr. Johnson thinks it not impossible that Vivian & Sons will eventually establish a branch of their works here, when the cost of transportation of matt would of course be saved between the sellers and buyers.

Maryland.

For months past, explorations have been going on in Montgomery county, and near Washington City, and in the JOURNAL OF MINING it was recently stated that three auriferous quartz veins cross the Potomac near the Falls, the rock from one of which assayed $6 per ton. We now have the following additional matter from the Rockville *Sentinel*: The facts show that the presence of rich gold deposits within a few miles of Washington is no longer problematical. The Maryland Mining Company, composed principally of Philadelphians, were the pioneers. They bought a tract of land about two miles below the Great Falls of the Potomac, of some one hundred and twenty acres; they have sunk several and run some drifts, and in these have found several well defined veins of gold-bearing quartz, which assays from forty to twenty-five hundred dollars per ton. Having demonstrated the abundance and richness of the quartz, they have erected a large steam quartz mill for the reduction of these ores, and will be ready to put it in operation in a couple of weeks from this time. The abundance and richness of the quartz has created a great demand for the stock of this company. Adjoining the Maryland mines, and within a few yards of their openings, the veins enter the Henry tract, now owned by Messrs. Mace, Metcalf, Kilgour, Dietrick and Casey, of Washington City. This is a large tract, containing five hundred acres, and having five veins, each a mile in length, through it. Some of these veins have been opened, and are found to be exceedingly rich. We have seen a number of specimens from this tract that are very rich, containing large quantities of gold, apparent to the naked eye. Near by are the "Homiller" tract owned by Dr. Kidwell, Marshall, Lamon and others; and the "Muncaster" farm, owned by Judge Casey and others. All of these contain the veins, and promise the same richness that the others exhibit. Immediately above the "Cabin John" bridge are the lands of the Union Arch Gold Mining company, organized with a capital of two millions of dollars. They are sinking shafts, &c., and their preliminary assays show the same richness exhibited above. In addition to these there are several other parties operating on the Virginia side of the river, and these explorations are developing large veins of copper, copper sulphurets, pyrites of iron, silver, lead, &c., besides giving indications of the presence of gold in very considerable quantities. Many experienced miners and skillful mining engineers have visited the region lately, and they all concur in the opinion that, when developed, these will be among the richest mines in the country.

Utah.

The Salt Lake City *Vedette* of Sept. 13, says: Thursday we received a call from Mr. J. W. Gibson, who is operating in the Stockton mines. He informs us that he has erected and put in operation a smelter with a capacity of 600 pounds a day. Nine runs have been made, of a hundred pounds each, and 300 pounds of metal was obtained, some of which has been brought to this city, and the result of an assay by Messrs. Bohm & Mollier is $228 of silver to the ton, the remainder being nearly pure lead. This furnace is constructed with the fire-stone found at Stockton, and works admirably. The cost of the furnace was $300. It requires three men to work it and uses two cords of wood to the ton of ore, no coal being required. Ore is delivered at the furnace for one dollar per hundred, and wood for $6 per cord. Mr. G. will go to work immediately putting up a cupell furnace, so that inside of twenty days he will be turning out silver bricks. These are solid facts which speak for themselves, and the result is enough to satisfy the expectations of the most sanguine. It shows what can be done when capital is brought to bear, extensive works erected and shafts sunk down to a greater depth. This furnace is small and of the most primitive, description and its proprietor is making his first attempt at the business. He is entitled to considerable credit for his enterprise in giving us such undeniable proofs of the richness of the Stockton mines, and we may expect that at an early day next season quite a number of large works will be turning out silver bricks by the ton. General Connor, Mr. Ransohoff, Captain Brown, Dr. Williamson, and several other gentlemen, from this city, witnessed the working of Mr. Gibson's furnace, and they all pronounce it highly satisfactory.....General Connor's machinery will be at Stockton within a few weeks, and the large furnace which is being erected by James Finnerly is rapidly approaching completion, and by one year from this time we believe Stockton will be one of the leading mining towns of the Territories.....Assays of Stockton ore made by Bohm & Molitor, give to the ton of 2000 pounds: Pleasant Hill, —gold traces, silver, oz. 9.72; value, $12 56. Hard Times No. 2—gold traces, silver, oz. 81.40; value, $105 23. Great Central—gold traces, silver, oz. 66.82; value, $86 38. Quandary—gold traces, silver, oz. 43.74; value, $56 65.

Oregon.

From the Portland *Herald*, August 25th, we take the following: We were shown a couple of ounces of fine, retorted gold yesterday, which was represented as having been taken out of the banks of a creek on the Lower Columbia, within one mile of the river. The gold appears to be what is termed "quartz-gold." What we saw was taken out in less than a week, as the men have only been gone that length of time. We are not informed as to the exact locality, as the parties are now engaged prospecting and will keep their whereabouts secret, until such time as they have secured all the ground they need.... We learn, by parties from the upper country, that there are at least 2,000 men on the way down to Portland, in a strapped condition, and ready to denounce the mines as a "bilk." People need not be alarmed by such stories.... The ton of quartz which was sent to San Francisco some time since from Vancouver has been heard from. The orders were misunderstood, and only an assay made, instead of the whole ton being crushed. The quartz men intend sending a man down to look after the affair, and see that a fair working test of the whole amount is procured.

Arkansas.

A telegraph from Little Rock, 22d inst., runs thus: A perfect flood of persons, excited by mining reports from Western Arkansas, are pouring through this city on their way out to the silver mines. Some twenty companies at least, at present prospecting in Tennessee, have sent out agents to the supposed new El Dorado. The influx of new-comers will probably cause this State to successfully compete with others for emigration.

Pennsylvania.

It is stated that the old copper mine in West Fallowfield township, Chester county, Pa., worked and abandoned prior to the revolutionary war, is now being opened. The company have opened the old shaft to the depth of thirty feet, and find a side excavation of some fifteen feet in length and the same in width. Parties from Philadelphia are successfully engaged in digging copper ore at the Gap, at the distance of four or five miles from the above old mine.... The gold shaft in the Dunkard Region, Greene Co., Pa., is slowly but surely progressing, and is now excavated to the depth of about 100 feet.

Virginia.

The Lynchburg *News*, of October 2nd, says: Mr. R. B. Catherwood, of New York city, purchased, on Wednesday, one of the most valuable gold mines in Virginia, recently discovered by Messrs. Benj. Smith and Brothers, of Spottsylvania county. The sale was made for about $50,000 cash.

Australia.

From the report of the mining department of Victoria for the year 1865, we learn that, notwithstanding the drought, nearly the same number of miners were employed in 1865 as in the previous year until the last quarter. The total number of alluvial miners was 65,484, and their average earnings £6 16s. 3d. per man per annum, showing an increase over the rate of 1864 of £5 10s. 3d. The quartz-miners were 17,730 in number, and their average earnings £101 10s. 5½d., a sum which shows a decrease of £28 3s. 4d. The Chinese diggers have not increased in numbers, and while some 20,900 are engaged in alluvial workings, only 28 have been engaged in reefing. In alluvial mines the number of steam engines has increased from 441, with 6,891 horse-power, in 1864, to 473, of 8,208 horse-power, in 1865. In quartz-mining the increase has been from 447 engines, of 7,746 horse-power, driving 4,575 stamp-heads, to 491 engines, of 8,606 horse-power, propelling 5,119 head of stamps. The value of the whole mining plant of the colony is set down at £1,773,271. Not fewer than 725 square miles of auriferous ground are mined upon, and in these 2,029 distinct auriferous quartz reefs ars worked. The value of all the claims in the colony is estimated by the registrars and surveyors at £8,498,924. The average yields from the quartz reefs has been improved, probably by the greater care now shown ine th treatment of the crushed stone. The 700,340 tons reduced in 1865 gave an average of 11dwt. 17.4gr. Of tailings, mullock and cement 196,422 tons have been passed under the stampers, with an average yield of 4dwt. 16gr. to the ton. It appears that not less than 1,937 miles of water races have been cut or constructed, at an average cost of £138 per mile, and that the daily quantity of water they divert for useful purposes is 459,281,124 gallons. In 1865, not fewer than 719 gold-mining leases were issued, covering 13,918 acres; and the unmber in force on the last day of December was 1,043 for 15,779 acres. Forty-nine water-right licenses were issued in the course of the year, the capital to be invested being £75,907. The department estimates that the total value of the gold produced in the colony up to the end of 1865, amounted to no less than £123,992,184; silver, £2,795; tin, £179,066; antimony, £25,368; coal, £2,899; lignite. £205; kolin, £7,028; flagging, £600; slates, £180; diamonds, £79; and sapphires, £150; or a total of $124,210,654. Bismuth, it is stated, occurs at Wombath Creek, in the mining subdivision of Omeo, but little is known on the subject at present. Copper is found on the Thompson River, and the mines there are about to receive a trial at the hands of practical men. Molybdenum is found in the quartz at Yackandandah, but has not yet been worked. The antimony of Heathcote, assayed in London, has been found to give 54.35 per cent. of metallic antimony, 8,175 ounces of gold, and 80,050 ounces of silver per ton of 20cwt. of ore.

British Columbia.

The Victoria (V. I.) *Colonist*, of August 28th, contains the following news from Cariboo. At Grouse creek, Aug. 16th, the Discovery company have got into a deep channel, from which they can obtain from $6 to $12 to the pan in gravel. The Carolina company struck good pay last week, and are still following the pay streak. The Hopple company are averaging from eight to ten ounces a day; five men at work. The Salt Spring company are taking out good pay.....At Conklin's Gulch the United States company have run a tunnel three hundred and fifty feet into the hill, and have struck a channel containing a large deposit of washed boulders and gravel, in which they can get as high as seventy cents to the pan. The Hood company have struck a hill channel three hundred and fifty feet from the creek, in which they find prospects from twenty-five to thirty-seven cents to the pan.....At William's creek (Aug. 20th) Bradley, Nicolson & Co. are averaging from seventy to eighty ounces a week. Try Again company will commence washing to-day. Wide West company are making about wages. Forward company are making from $10 to $12 a day to the hand. Wilson company washed up thirty-five ounces for last week; they got one piece weighing two ounces. Browse company washed up for last week forty ounces, and for week before last fifty-eight ounces; and many others are doing well.....At Lowhee creek the Grouse Creek Red Rock Flume company struck a prospect of $80 to three pans of dirt in their ground sluice since last

Friday.....At Canyon creek, Aug. 21, the Blue Lead company were working, two men shovelling washing out five ounces in one day. This gold is taken from a ledge of rotten quartz; it is nearly all rough and ragged gold.....J. E. Edwards recently went from Williams' creek to the Farks Quesnel, and discovered two creeks, which he named Coquet and Cedar creeks. With two others he prospected for only a short time on Coquet creek, where they found gold which would pay, according to the superficial trial they gave it, about an ounce a day to the hand. They afterwards went to Cedar creek. About one mile from its mouth they prospected on a bar by ground sloucing, from nine A. M. to twelve o'clock. They then turned off the water and panned off seven and a quarter ounces of round, coarse gold, resembling the gold of Williams' creek.....As to Big Bend we have the following: There is truth in the reported strike on the benches on French creek, in so far that the miners considered that they had found diggings that would pay wages ($7).

GOLD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Acadia			Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Ada Elmore	200,000	$2,000,000	South Boise, Idaho	B. Lawrence, 157 B'way, N. Y.
Amber	300,000	300,000	Greene Co., Penn	Geo. W. Grove, 276 S. Third, Phil
Albion		300,000	Halifax, Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Alps	100,000	250,000	Illinois Central Dist., Col	J. Stanton, Jr., 25 Nassau, N. Y.
Ascot	50,000	5,000,000	Sherbrooke, Canada E	G. H. Morrison, 17 Nassau, N. Y.
Atlantic				Chas. Barett, 13 Doane, Boston.
Atlatic & Pacific	50,000	5,000,000	Humboldt T., Humboldt co.	J. N. Sewall, 8 Broad, N. Y.
American	100,000	5,000,000	Gregory Dist.	
American Flag	60,000	600,000	Nevada Dist., Col.	H. Foles, 71 B'way, N. Y.
Astor	200,000	1,000,000	On Comstock Lode	J. Chapman, 71 Broadway, N. Y.
Baltic			Colorado	New York.
Bates & Baxter			Colorado	New York.
Bay State	200,000		Colorado	Lem'l Bangs, Boston.
Benton	100,000	500,000	Colorado	F. W. Capen, 44 Ex. Pl., N. Y.
Black Hawk	50,000	5,000,000	Gilpin co., Col	D. Littlejohn, 81 John, N. Y.
Beacon		500,000	Halifax co., Nova Scotia	J. B. Post, 20 Ex. Pl., N. Y.
Bobtail	100,000	1,000,000		J. Stanton, Jr., 25 Nassau, N. Y.
Briggs	10,000	1,000,000	Gilpin co., Col	D. Littlejohn, 81 John, N. Y.
Bradshaw	250,000	1,000,000	Yavapai County, Arizona	O. H. Conover, 219 Dock st., Phil.
Burroughs	100,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Bullion	200,000	1,000,000	Bannock, Montana	69 Liberty, N. Y.
Bullion Consoli.	300,000	300,000	Sammit and Clear Creek, Col	J. P. Whitney, 19 Lindall, Boston
Calvin	200,000	1,000,000	Clear Creek co., Col	
Canadian				A. Call, 7 Phœnix B'l'g, Boston.
Chem. Gold&S. R				64 B'way
Ch. Un. Gold Co.	240,000	1,200,000		Jesse G. Pitts, 69 Liberty
Chebucto	100,000	500,000	12 miles from Halifax	J. E. M. Gilley, Boston.
Clarendon		500,000	5 miles from Halifax	H. Doane, 41 State, Boston
Chase	5,000	500,000	Colorado	W. E. Lawton, 81 John, N. Y.
Central Gold M.	20,000	1,000,000	Central City, Col	L. Bangs, 17 Nassau, N. Y.
Central Mining	200,000	1,000,000	Colorado	46 Exchange Pl., N. Y.
Chandiere	100,000	500,000	5 000 A Famine Riv. C. E	Wm. B. Fowle, Boston.
Cobden	100,000	1,000,000	Idaho	New York.
Colonial				W. N. Ely, 7 Trav'r B'l'g, Boston.
Colorado Boston			Colorado	R. C. M'Laughlin, 60 State, Bos'n.
Colorado N. Y.			Colorado	12 Pine, N. Y.
Coleman			Colorado	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	10 Pine, N. Y.
Consuelo Gold				54 William.
Consol Gregory	50,000	5,000,000	Gregory Dist., Col	30 Pine, N. Y.
Cook & Kimball	1,000	150,000	Colorado	W. W. Baldwin, 35 Wm., N. Y.
Copainshee	250,000	5,000,000	Parke co., Col	J. C. Stocker, 137 B'way, N. Y.
Corrisannee	100,000	1,000,000	Colorado	New York.
Commonwealth			Nevada	Philadelphia.
Corrydonn	100,000	2,500,000	Gilpin co., Col	46 Exchange Pl., N. Y.
Continental	20,000	2,000,000	Gregory Dist., Col	115 Liberty, N. Y.
Central Gold	200,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Dauphin & Colo.	200,000	1,000,000	Colorado	John S. McMullin, 423 Walnut, Pa.
Day & Bushnell	300,000	3,000,000	Colorado	T. Chalmers, Jr., 20 Ex. Pl., N. Y.
De Lery		10,000,000	Chandiere Valley, Canada E	J. M. Winchell, 72 Cedar, N. Y.
Denver	50,000	1,000,000	Gilpin & Clear Creek, Col	J. Wadsworth, 61 Cedar, N. Y.
Devonshire				W. Stockbridge, 74 Fr'klin, Bos'n.
Downieville	300,000	300,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Dorset			Chandiere River, C. E	F. McJimsey, 59 Wm., N. Y.
Eagle	100,000	1,000,000	Gold Dirt Dist., Col	J. P. Davies, 81 John, N. Y.
East Bannack	100,000	200,000	Bannack City, Montana	J. Callender, 48 Ex. Pl., N. Y.
Eldorado	500,000	2,500,000	San A Dist., 9 miles of Austin	208 S. Fourth, Phila.
Empire Mill & M				O. F. Griffin, San Francisco.
Enriquetta			Arizona	New York.
Esperanza		500,000	Star D., Humboldt co	117 Broadway, N. Y.
Etna	50,000	500,000	Nevada Dist., Col	C. W. Bryant, Boston.
Excelsior	30,000	300,000	Central City, Col	J. Weatherbee, Jr., 11 P. B'g, Bos.
Fairmount	20,000	200,000	Colorado	John P. Harker, 109 N. 6th, Phil.
Famine Falls	100,000	1,000,000		D. L. Dodge, 80 B'way, N. Y.
Garrisons	100,000	5,000,000	Colorado	C. G. Mease, 29 William, N. Y.
Gem	25,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Georgetown			Colorado	New York.
Gilbert River				C. E. Jackson, 18 Phe'x B'g, Bos'n.
Gilpin				C. W. Galloupe, 76 State, Boston.
Golconda	250,000	5,000,000	Sherbrooke, Canada E	W. H. Adams, 19 Broad, N.Y.
Gold Field				C. B. Cowling, 39 Kilby, Boston.
Gold Rock	5,000	500,000	Central City, Colorado	R. M. Lockwood, 113 Wall, N. Y.
Gold Hill	50,000	500,000	Colorado	W. T. Eustis, Boston.
Gold Mountain	600,000	6,000,000	Clear Creek Co., Colorado	25 Nassau, New York.
Gold Min'g of Col	50,000	5,000,000	Colorado	E. Latham, 23 William, N. Y.
Golden Gate	60,000	600,000	Sum., High'd & Mill C. D., Mon	J. Lorge, Jr., 117 B'way, N. Y.
Gunnel Central			Colorado	70 Broadway, N. Y.
Gunnel Gold	300,000	3,000,000	Colorado	F. E. Roelfson, 78 & 80 B'way, N.Y.
Gregory	20,000	1,000,000	Colorado	Thos. Wildes, 17 William, N. Y.
Granada	50,000	125,000	Colorado	J. Stanton, Jr., 25 Nassau, N. Y.
Great Western	60,000	600,000	Russel Dist., Col	E. Kemeys, 70 Broadway, N. Y.
Gunnel Gold	100,000	1,000,000	Colorado	F. E. Roelofson, 78 B'way, N. Y.
Halifax				A. Case, 7 Phœnix B'l'g, Boston.
Harmony				Demas Barnes, 21 Park Row.
Hemit'ge Ranch	30,000	300,000	El Dorado, Cal	
Home	80,000	2,000,000	G'ld Dirt Lode, Gilp. co., Col	J. P. Davies, 81 John, N. Y.
Holman	150,000	300,000	Gilpin co., Col	J. O'Neill, 24 Nassau, N. Y.
Humboldt	100,000	500,000	Colorado	78 B'way.
Idaho Gold	100,000		Montana	5 Pine, N. Y.
Isaac's Harbor	100,000	500,000	Isaac's Harbor, Nova Scotia	W. F. Shirley, 137 B'way, N. Y.
Isle Royale				44 Ex. Pl.
Kansas Colorado	100,000	1,000,000	Colorado	J. G. Greenlies, 111 B'way, N. Y.
Kent				G. H Wyman, 19 Phe'x B'l'g, Bos.
Kip & Buell	100,000	200,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Knickerbocker	100,000	1,000,000	Colorado	F. Avery, 78 B'way, N. Y.
La Crosse	100,000	$1,000,000	Nevada Dist., Colorado	H Fales, 71 B'way, N. Y.
Liebig	200,000	$1,000,000	Colorado	
Lake Major	12,000	600,000	Nova Scotia	Fred. Franck, 113 Water, N. Y.
Mariposa Gold	100,000	10,000,000	Bear Valley, Cal	G. W. Farlee, 34 Wall, N. Y.
Mammoth	50,000	500,000	Colorado	J. Jarrett, 41 Liberty, N. Y.
Manhattan	100,000	1,000,000	Colorado	W. R. Lothrop, 172 B'way, N. Y.
Massachusetts	250,000	1,200,000	Gilpin co., Col	W. D. Briggs, 11 Phe'x B'l'g, Bos.
Merchants	50,000	600,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N. Y.
Metropolitan				
Mountain Pride	100,000	1,000,000	B'r C'k, St. Rse., Idaho	29 Pine, N. Y.
Montague	50,000	500,000	near Halifax, Nova Scotia	C. B. Cowling, 39 Kilby, Boston.
Mount Alpine			Griffith Dist., Clear C'k, Col	J. B. Randol, N. Y.
Mount Vernon	500,000	5,000,000	Mt. V. & Mam'th Dist., Nev	25 Park Row, N. Y.
Mount Vista	50,000	500,000		J. Chapman, 23 Nassau, N. Y.
Montana	100,000	400,000	Nevada, Ills., Greg'y, Col	A. L. Guerber, 54 Wm, N. Y.
Monte Christo	100,000	2,000,000	White Pine District, Nev	Thos. Dunlap, 413 Chestnut, Phil.
Montezuma	100,000	500,000	Colorado	F. B. Webster, Boston.
Montrose	100,000	1,000,000	Clear Creek co., Col	C. A. W. Sibley, 80 B'way, N. Y.
Morning Star	5,000	5,000,000	Owyhee co., Idaho	E. M. Barnum, 137 B'way, N. Y.
Mexican Pacific	100,000	10,000,000	Mexico	J. Mackie, 88 Wall, N. Y.
Melones & Stan			Calaveras co	606 Mont, San Francisco.
National	300,000	3,000,000	on So. Boulder C'k, Col	31 School, Boston.
Nevada Star				25 Pine, N. Y.
New England	50,000	150,000	Black Hawk, Col	J. Weatherbee, Jr., Boston.
New Mexico			near Santa Fe	
New Gregory				W. A. Kent, 144 State, Boston.
New York City	50,000	5,000,000	G'd Canon D't, Land. co. Nev	10 Pine, N. Y.
New York Dist.	50,000	500,000	Austin, N. Y. Dist., Nevada	71 B'way, N. Y.
New York of Col	60,000	1,000,000	Colorado	F. E. Roelfson, 74 B'way, N. Y
N. Y. & Nevada	100,000	1,000,000	Nevada	J. J. Osborn, 30 Pine, N. Y.
N. Y. G Min'g	100,000	1,000,000	Colorado	F. E. Roelofson, 78 & 80 B'way.
N. Y. & Eldor'do	250,000	2,500,000	Nevada	G. H. Munroe, 106 B'way, N. Y.
N. Y. & Idaho			Idaho	180 Chatham, N. Y.
N. Y. & Santa Fe			Nevada	New York.
N.Y. & Owyhee		1,000,000	Owyhee co., Idaho	6 Pine, N. Y.
N. Y & Oro Fino	10,000	1,000,000	Owyhee co., Idaho	137 Broadway, N. Y.
N. Y. & Reese R			Nevada	New York.
N. Y. & Renfew				2 Murray, N. Y.
N. Y. & Washoe			Nevada	New York.
North Clear C'k	100,000	1,000,000	Gilpin co., Col	J. Francis, 80 B'way, N. Y.
Nova Scotia				Chas. Barrett, 13 Doane, Boston.
N. Y. & Nova Sc	100,000	1,000,000	Tangier, Nova Scotia	Jos. E. Gay, 3 Hanover, N. Y.
National S Min'g		1,500,000	Owyhee co., Idaho	115 B'way, N. Y.
Occidental	5,000	500,000	Nevada & Ills. C. Dist., Col	100 B'way, N. Y.
Oldham				Chas. Barrett, 13 Doane, Boston.
Ophir	62,500	625,000	on Comstock Lode, Nevada	Moses A. Hopbock, 45 William.
Pacific	40,000	4,000,000		24 Pine, N. Y.
People's	100,000	5,000,000	Alpine & Sierra cos	23 Nassau.
Peck				E. R. Sawyer, 144 State, Boston.
Perigo	60,000	3,000,000	Ind. Dist., Gilpin co., Col	J. W. Stratton, 90 B'way, N. Y.
Pine Mountain	30,000	3,000,000	Pine Mountain Dist., Nev	F. K. McCully, 157 B'way, N. Y.
Pioneer & Inskip			Buena Vista Dist., Nevada	15 Nassau, N. Y.
Phila. & Color'do	20,000	1,000,000	Central City, Col	E. W. Clark & Co., Phila.
Phelps & Gilm're	200,000	1,000,000	Colorado	W. H. Steudevant, 25 Nassau.
Pleasant Valley	125,000	1 250,000	Colorado	J. S. Lyon, 69 Wall, N. Y.
Pontiac	50,000	1,000,000	Ill. Cen. M Dist., Col	R. H. Rickard, 19 Nassau.
Prescott	100,000	1,000,000	Central Arizona	69 B'way, N. Y.
Quaker City			Ind't D't, G'd D't City, Col	103 South Third, Phila.
Quartz Hill	40,000	100,000	Nevada Dist., Col	J. A. Tyler, 29 Wall, N. Y.
Ranche C'k	10,200	1,200,000	Pine Wood Dist., Nevada	18 Broad, N.Y.
Realito		1,600,000	G'd Hill D., Storey co., Nev	117 B'way, N. Y.
Reese River Pr'l	100,000	1,000,000	Amador Dist., Lander Co., Nev	Elijah Alliger, 67 Wall, N. Y.
Renfrew				W. Stockbridge, 74 Fr'klin, Bos'n.
Republic	15,000	1,500,000	Amador D., Lander co., Nev	67 Exchange Pl., N. Y.
Rocky Mountain	50,000	500,000	Grey & Empire Dists., Col	E. L. Bolles, 70 B'way, N. Y.
Reciprocity	100,000	1,000,000	Canada East	B. B. Grant, Jr., 71 B'way, N. Y.
Scorpion			Virginia City, Nevada	617 Clay, San Francisco.
Sherbrooke	100,000	1,000,000	Sherbrooke, Canada East	F. Schumacker, Cliff, N. Y
Silas Wright	60,000	600,000	Amador D., Lander co., Nev	18 Wall, N. Y.
Silver State	100,000	500,000	Humb't Starr, Pr. R. D, Humb't co., Nevada	R. S. Miller, 49 William, N. Y
Silver Wave	300,000	3,000,000	Resee riv, Lander co., Nev	Emmet Blair, 243 B'way, N. Y
Smith & P'rmlee	125,000	2,500,000	Colorado	G. A. Lathrop, 4 Broad, N. Y.
Smithfield	100,000	400,000	Gilpin Co., Col	A. F. Baum 48 Broad st., N. Y.
Spanish		3,000,000	La Plata, Churchill co., Nev	228 South Third, Phila.
So. Clear C'k			Colorado	Canastota, N. Y.
Starlight Ledge	50,000	500,000	P'ville, El Dorado co	
Star of Color	200,000	2,000,000	Colorado	J. N. Powers, 22 Pine, N. Y.
Standard	50,000	500,000	Gregory Dist., Col	T. A. Mitchell, 70 B'way, N. Y.
Steptoe	20,000	2,000,000	G'd Can., Lander co., Nev	10 Pine, N. Y.
Sterling City		1,200,000	Colorado	New York.
Stewart	100,000	500,000	Colorado	C. Durham, 31 Exchange, Boston.
Suffolk				Carles Cobb, 22 William, N. Y.
Southard				Wm. Wallace, 11 Doane, Boston.
Stafford				C. E. Jackson, 15 Central, Boston.
Tascher	100,000	1,000,000	Colorado	F. J. Wright, 8 Wall, N. Y.
Texas	50,000	500,000	Black Hawk City, Colorado	Wm. E. Parish, 155 B'way, N. Y.
Triunfo			San Antonio, L. Cal	San Francisco.
Union	240,000	12,000,000	Colorado	F. A. Potts, 110 B'way.
United States	75,000	1,500,000	Colorado	J. P. Stevens, N. Y.
University				31 Nassau, N. Y.
Virginia City	250,000	250,000	Nevada	J. B. William, 78 & 80 B'way.
Wauba Yuma	600,000	6,000,000	Arizona	35 William, N. Y.
Waddingham	48,000	1,200,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N.
Waverley				J. Leighton, 97 State, Boston,
Windsor Gold M	10,000	100,000	Colorado	25 William, N. Y
Wilson & Cass			Colorado	New York.

LEAD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Amenia	100,000	$ 500,000	Duchess co., N. Y	G. Furman, 77 Cedar, N. Y.
Bucks County	10,000	200,000	Bucks co., Pa	R. R. Sinclair, 53 Ex. Pl., N. Y.
Canada	40,000	250,000	Canada	Alb. Case, 7 Phe'x B'l'g, Boston.
Clute	150,000	550,000	Macomb T. St. Law. co., N. Y.	Bev'l'y S. Merrill, 42 Cedar, N.Y.
Continental	200,000	500,000	Martinsburg, N. Y	J. Sickles, 57 Ex. Pl., N. Y.
Eastport	100,000	1,000,000	Eastport, Me	R. Vose, 54 William, N. Y.
Erie	40,000	4,000,000	Orange co., N. Y	Ogden Gaul, 25 Pine, N. Y.
Hampton	100,000	500,000	Hampshire co., Mass	C. W. Bryant, Boston.
Jefferson				65 Wall, N. Y.
King's Hill	0,000	50,000		W. L. Haskin, 180 B'way, N. Y.
Lake Superior	200,000	1,000,000	Secs. 5 & 36 T., 49 & 50 R., 28 & 29 Marquette co, Mich.	C. L. Mather, N. Y.
Lancaster	50,000	250,000	Lancaster co., Pa	J. R. Sibley, 35 Pine, N. Y.
Macomb	10,000	550,000	Macomb T. St. Law. co., N. Y.	C. E. Scofield, 42 Cedar, N. Y
Maine	50,000	500,000	Eastport, Me	A. L. Butler, 54 William, N. Y.
Mineral Point	100,000	500,000	St. Lawrence co., N. Y	H. W. Warren, 60 City Ex., B'stn.
Morgan	100,000	500,000		W. Williams, 42 Cedar, N. Y.
Manhan				40 B'way, N. Y.
Mount Hope	80,000	200,000	Mt. Hope, Orange co., N. Y.	W. Williams, 24 Pine, N. Y.
New Hampshire	100,000	500,000	New Hampshire	W. A. Farrar, 71 B'way, N. Y.
N. Y. & Boston		1,000,000	Chester co., Pa	S. M. Cockeln, 22 William, N. Y
Oswegatchie				24 Pine, N. Y.
Owens Lake	50,000	250,000		C. W. Bond, 78 Cedar, N. Y.
Phœnix	50,000	250,000	Columbia Co., N. Y	G. W. Butler, 54 William, N. Y.
Placentia Bay	200,000	1,000,000	Newfoundland	J. Simpkins, 29 Wall, N. Y.
Ramsay	20,000	500,000	Township Ramsay, C. W	C. W. Bryant, Boston.
Rochester	200,000	500,000		J. A. Ferguson, 8 Wall, N. Y
Rossie				24 Pine, N. Y.
Rosa Clara	100,000	1,000,000		H. Lathrop, 25 Nassau, N. Y.
St. Clair	100,000	1,000,000		H. B. Hawkins, 25 Nassau, N. Y
St. Joseph	100,000	1,000,000	St. Francis Co., Missouri	Jas. R. Knapp, 6 Broad, N. Y.
Shawangunk	100,000	500,000	Mt. Hope, Orange co., N. Y.	E. P. Ackerman, 48 Pine, N. Y
Sussex	25,000	625,000	Sparta Town. Sus'x co., N. J.	F. H. Stow, 53 Cedar, N. Y.
Walkill			Orange co., N. Y	W. A. Scott, 11 Wall, N. Y.
Warren			Warren, Gratton co., N. H	J. S. Christie, 100 B'way, N Y
White Mountain			New Hampshire	111 B'way, N. Y.

SILVER.

COMPANY.	SHARES.	STOCKS.	LOCATION OF PROPERTY.	SEC'Y AND PLACE OF BUSINESS.
Amazon	25,000	$250,000	Nevada	W. L. Louther, 134 So. 3d, Phil.
Argentine	50,000	250,000	Argentine Dist., Colorado	D. L. Demmon, 134 State, Boston
Arizona	100,000	10,000,000	22 m W of Tubac, Arizona	J. B. Randol, 25 Nassau, N. Y
Astor	200,000	1,000,000	On Comstock Lode, Nev	J. Chapman, 71 Broadway, N. Y.
Atlantic & Pac.	50,000	1,000,000	Humboldt T, Hum't Co, Nev.	J. N. Sewall, 8 Broad st., N. Y.
Big Smoky	20,000	600,000	Smk'y Hill, Lander Co. Nev.	71 B'way.
Black Eagle	7,000	350,000	Carson, Owyhee co., Idaho	O. D. Gardner, 40 Maiden lane.
Bullion	200,000	1,000,000	Bannock, Montana	55 Liberty street.
Bush	50,000	500,000	Austin City, Nevada	176 Chambers st., N. Y.
Combination	5,000,000	50,000	Nevada	J. W. Stoute, Jr., 155 B'way, N.Y
Colorado Con			Cedar Hill Nevada	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	J. E. Smith, 10 Pine street, N. Y.
Conn. & Nevada	120,000	1,250,000	Averill, Churchill Co. Nev.	49 Liberty street, N. Y.
Commonwealth	200,000	2,000,000	Gold Hill, Nevada	78 B'way. N. Y.
Cosmos	10,000		Owyhee Co, Idaho	137 Broadway, N. Y.
Del Norte & S'br			Lower California	New York.
Durango	5,000	500,000		W. R. Garrison, 73 W'm st., N Y.
East Bannack	100,000	200,000	Bannock City, Montano	J. Callender, 49 Ex. P., N. Y.
Empire G. & S.	100,000	10,000,000	Bodie Bluff, Mono	H. R. Gates, 191 Broad'y, N. Y.
Empire and Silver State	20,000	2,000,000	Reese River Dist., Nevada	57 B'way, New York.
Eldorado	500,000	2,500,000	San A 90 m s of Austin, Nev.	208 South Fourth street, Phila.
Essex & Diadem	125,000	2,500,000	Sierra dis, Humboldt C. Nev.	A. R. Wetmore, 81 Vosey st, N.Y.
Franklin			Nevada	Philadelphia.
Gem	200,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Globe	100,000	500,000	Austin, Nevada	J. W. Brazier, 26 Pine, N. Y.
Good Hope	20,000	1,000,000	40 m S of Austin, Nevada	80 Broadway, N. Y.
Huron			Montano	New York.
Incas	300,000	300,000	Summit co., Colorado	J. P. Whitney, 19 Lindall, Bost.
Knickerb'r and Nevada	20,000	2,000,000	Union Dis, Nye Co, Nev	H. R. Shotwell, 70 Cedar, N. Y.
Lander Hill			Nevada	74 B'way, New York.
Lincoln		1,000,000	Owyhee Co, Idaho	80 Broadway, N. Y.
Lw'r California	40,000	2,000,000	North Part of Lower Cal.	55 William street, N. Y.
Madison	30,000	3,000,000	Nevada	W. W. Perkins, 71 Bd'way, N. Y.
Macedon			Nevada	Philadelphia.
Manhattan			Nevada	57 B'way, New York.
Merchants	30,000	600,000	Alturus Co. Idaho	157 Broadway, N. Y.
Metropolitan	15,000	1,500,000	Austin City, Nevada	158 Broadway, N. Y.
Morning Star	5,000	5,000,000	Owyhee County, Idaho	137 Broadway, N. Y.
Mount Vernon	500,000	5,000,000	Mount Vernon & Mammoth District, Nevada	New York.
Mount Vista	50,000	500,000		J. Chapman, 71 Bway, New York.
National	15,000	1,500,000	Owyhee Co. Idaho	115 Broadway, N. Y.
Nevada	100,000	300,000	Mountain Wells, D. Ch. co.	Nev 323 Walnut street, Phila.
Nevada	20,000	1,200,000	Nevada	E. L. Bolles, 74 B'way, N. Y.
New Y'k & Ione	20,000	2,000,000	Ione City, Nye Co., Nev	71 Broadway, N. Y.
New York	1,500	1,500,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y.
New York City	50,000	5,000,000	Gold Can Dist. Lander Co. N.	10 Pine street. New York.
New Y'k Dis'ct	50,000	5,000,000	80 m f'm Austin, N. Y. Dis. Nevada	S. A. Hopkins, 71 Broadway, N Y
New Y'k & Nev.	10,000	1,000,000	Nevada	J. J. Osborn, 30 Pine street, N. Y
N. Y. & Owyhee		1,000,000	Owyhee Co. Idaho	6 Pine street, New York.
N.Y. & Oro Fino	10,000	1,000,000	do do	137 Broadway, New York.
N. Y. and Silver Peak	20,000	2,000,000	Nye County, Nevada	R. C. Root, 74 Broadway, N. Y.
N Y. & Santa Fe			Nevada	New York.
N. Y. & Washoe			Nevada	New York.
North Am. M'g			Nevada	Philadelphia.
Ocean Transit		1,500,000	Lower California, Mexico	24 Pine, N. Y.
Ophir			On Comstock Lode, Nev	
Pah Ranagat C'l	50,000	5,000,000	Nevada	26 Pine, N. Y.
People's	100,000	500,000	Alpine & Sierra Counties	8 Pine street, New York.
Phœnix	200,000	2,000,000		48 East 26th street, New York.
Picacho	50,000	2,000,000	Arizona	T. H. Perkins, New York.
Pine Mount'n	30,000	3,000,000	Pine Mount'n Dist. Nev	F. K. McCulley, 100 Bd'wy, N. Y.
Pioneer & Inskip			Buena Vista Dis., Austin, Nev	15 Nassau street, New York.
Prescott	50,000	2,500,000	Arizona	T. H. Perkins, New York.
Presidential	125,000	2,500,000	Austin, Nevada	Wm. Lemmon, 17 Broad, N. Y.
Republic	15,000	1,500,000	Amador. D Lander Co, Nev.	67 Ex. Place, New York.
Revenue Exten.	50,000	500,000	Lander County, Nevada	W. L. Kite, 142 South 4th, Phila.
Rosario & Carmn	5,244	1,480,000	Smaloa, Mexico	San Francisco.
San Antonio	60,000	3,000,000	Arizona	C. Lamson, 21 Nassau st., N. Y.
Seminole	7,000	1,500,000	Unionv., Humboldt Co., Nev.	L. G. Wilkin, 119 B'way, N. Y.
Silas Wright	60,000	600,000	Amador, D Lander Co, Nev.	18 Wall street, New York.
Silver Hill	40,000	1,000,000	Nevada	J. C. Hitchcock. 62 B'dway, N.Y.
Silver Series		1,000,000	Lander Co., Nevada	W. B. Rogers, 117 B'way, N. Y.
South Boise, T. Co	200,000	2,000,000	Alturas Co., Idaho	A. M. Palmer, 19 Broad st., N. Y
Star Hill	20,000	1,000,000	Nevada	155 B'way.
St'h Cl' Crk			Colorado	Canastota, New York.
Stephenson	500,000	1,000,000	18 m E of Ft. Fillmore	A. S. Kellogg, 22 Pine, New York.
Steptoe	20,000	2,000,000	Gold Can. Lander Co. Nev.	10 Pine, New York.
Sterling City		1,200,000		New York.
Tarshish	12,000	1,200,000	Toryabee Range, Un. D., Nev	H. S. M'Collum, 78 B'way, N. Y
Tempest	200,000	1,000,000		L. Bangs, 17 Nassau, N. Y.
Trumfo			San Antonio, Lo'wr Cal	San Francisco.
Toiyabee	50,000	5,000,000	Pine W'd, Mn'tn Dis, Nev	J. M. Brown, 157 B'wy, N. Y.
Union & El D'o.	100,000	1,000,000	Mogul Silver Mn'tn	40 Park Row.
Upper Missouri.		100,000	Montana	107 Broadway.
Vedder	21,000	2,100,000	Amador Dist., Nevada	L. G. Bingham, 80 B'way, N.Y.
Wamba Yuma	600,000	6,000,000	Arizona	35 William street, New York.
War Eagle	50,000	200,000	Owyhee Co., Idaho	G. M. Eldridge, 144 S. 4th, Pl.
Washington	22,500	2,250,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y.
White Mountain			New Hampshire	111 Broadway, New York.

COPPER.

COMPANY.	SHARES.	CAPITAL.	SITUATION OF PROPERTY	SEC'Y., AND PLACE OF BUSINESS.
Astor,	20,000	500,000	Michigan,	Pittsburgh.
Adventure,	20,000	1,000,000	Parts of Sections 3o, 36, T. 51, N Range 38 W,	W. H. Smith, 51 Ex. Pl, N. Y.
Etna,	20,000	500,000	1226 A in Secs. 6, 7, 18, T. 58, N R 24, W Keweenaw co. Mich.	B. A. Hoopes, 324 Walnut St., Phil.
Alb'ny & Bost'n,	20,000	1,000,000	Secs 7, 8, 9, 10, 11, T. 55, R. 33	Fred. Beck, 43 City Ex., Boston.
Anita,	20,000	500,000	Del Norte co., California,	8 Wall St., N. Y.
Algomah,	20,000	500,000	W½ S, 30, T. 51, R. 37,	L. W. Clark, Boston.
Allouez,	20,000	500,000	Town 57, R. 32, Sec. 31,	Horatio Bigelow, Boston.
Amy gdl'yd'l.,	20,000	500,000	E½ Secs. 16, 21, T. 58, R. 20, NW¼ Sec. 5, T. 57, R. 31, 160 A,	F. H. Womrath, 324 Walnut St., Philadelphia.
Arcadian,	20,000	500,000	NW¼ Sec. 20, T. 57, R. 33, 160 A,	C. P. Dixon, 48 Pine St. N. Y.
Atlas,	20,000	500,000	NE¼ of E½ & NW¼ of NW¼ Sec. 31, T. 57, R. 31,	L. W. Clark, Boston.
Aztec,	20,000	500,000	W½ Sec 31, T. 51, N. of R. 37,	L. W. Clark, Boston.
Bay State,	20,000	500,000	SW¼ Sec. 29, T. 58, R. 31,	L. W. Clark, Boston.
Bohemian,	20,000	500,000	E½ Sec. 31, NW¼ Sec. 32, T. 51, R. 37, W,	R. H. Rickard, 21 Nassau St., N.Y.
Boston,	20,000	500,000	Michigan,	H. W. Warren, 60 City Ex., B'st'n.
Canada,	20,000	500,000	Brome co., Canada East,	H. P. Mount, 3 Hanover St., N. Y.
Calumet,	20,000	500,000	Michigan,	Boston.
Concord,	20,000	500,000	Michigan,	Boston.
Carp Lake, M.,	20,000	500,000	T. 51, N. R. 43, W. S½ of N½ of N. Sec. 14, and E¼ Sec. 23, and NE¼ Sec. 23, 440 A,	W. H. Abel, 70 Wall St., N. Y.
Cascade, M.	20,000	500,000	SW¼ Sec. 9, T. 49, N. R. 39, W, in Ontonagon co., Mich.,	G. F. Riley, 35 Wall St., N. Y.
Copper Creek,	1,000	$100,000	Missouri,	H. M. Thompson, Missouri, Mo.
Copper Falls,	20,000	500,000	Sec. 14, T. 58, N. R. 31, W, Keewenah Point,	97 State, Boston.
Copper Harbor,	20,000	500,000	S½ Sec. 10, T. 58, R. 28, 320 A, Keewenah co.,	Fred. Beck, 43 City Ex., Boston.
Copper Creek,	20,000	500,000	Douglas co., Wisconsin,	T. B. Lawson, 71 Broadway, N. Y.
Central,	20,000	500,000	E½ Sec. 23, T. 58, N. R. 31, W,	J. Stanton, Jr., 25 Nassau, N. Y.
Cornwall,			Strafford, Orange co., Vt.,	D. H. Whitney, 17 State St., B'n.
Continental,	200,000	500,000	Martinsburg, New York,	J. Sickles, 50 Ex. Pl., N. Y.
Corinth,	20,000	500,000	Corinth, Orange co., Vermont,	W. A. Cleveland, 191 B'way, N.Y.
Copper Hill,			Wisconsin,	Boston.
Dacotah,	20,000	500,000	Sec. 35, T. 55, R. 34, Portage Lake,	J. M. Cooper, Milk St., Boston.
Delaware,	20,000	500,000		S. M. May, 326 Walnut St., B'st'n.
Dorchester,	20,000	500,000	Michigan,	31 and 32 City Ex., Boston.
Douglas,	20,000	500,000	E½ Sec. 30, T. 55, R. 3,	S. J. Edwards, William St., N. Y.
Dudley,				H. Bigelow 43, City Ex., Boston.
Eagle River,	20,000	500,000	T. 58, R. 31, Secs. 28, 29, 33, 34,	A. Lamson, 70 State St., Boston.
Ely,	00,000	500,000	325 A., Richmond, Canada East,	Ernest Sacchi, 82 B'way, N. Y.
Empire,	20,000	500,000	179 8 A., Secs. 1, 2, 11, 12, T. 58, N. R. 28, W. K'w'n co., Min.,	J. S. McMullin, 423 Walnut, Phil.
Eureka,	20,000	500,000	W½ Sec. 2, T. 49, N. R. 41, W. Ontonagon co.,	H. Shirley, 137 B'way, N. Y.
Evergreen Bluff,	20,000	500,000	NE¼ Sec. 6, T. 50, R. 38,	F. W. Capen, 44 Ex. Pl., N. Y.
Edwards'Copper	20,000	500,000	Michigan,	H. K. Thomas. 12 Wall, N. Y.
Eagle Harbor,	20,000	500,000	Michigan,	51 Ex. Place, New York.
Frue,	20,000	500,000	Michigan,	A. S. Kellogg, 22 Pine st., N. Y
Flint Steel R.,	20,000	500,000	Sec. 11, 12, T. 50, N. R. 39, W,	F. K. McCully, 157 B'way, N.Y.
Forest City,	20,000	500,000	320 A. NE½ Sec. 36, and SE¼ Sec. 25, T. 51, R. 43,	J. F. Paul, 19 Phœnix Building, Boston.
Franklin,	20,000	500,000	¼ Sec. 24, T. 55, N. R. 31 W.,	C. Emery, 26 Kilby St., Boston.
Franconia,	60,000	300,000	New Hampshire,	J. Hanna, 162 Fulton St., N. Y.
French Creek,	00,000	600,000	Chester co., Pennsylvania,	R. Roberts, 19 Nassau St., N. Y.
Garden City,	20,000	500,000	SW¼ Sec. 60, N. W. Sec. 59, T. 58, N. R. 31 W,	R. H. Howe, Chicago.
Girard,	20,000	500,000	600 A. Sec. 15, T. 58, N. R. 28, W. Keweenaw co., Mich.,	B. A. Hoopes, 324 Walnut, Phil.
Gr'd Portage,	20,000	500,000	SW¼ Sec. 36, R. 34, W,	A. S. Kellogg, 22 Pine St., N. Y.
Great Western,	20,000	500,000	SE¼ Sec. 30, & SW¼ Sec. 29, T. 21, K. 320 A., Ontonagon	J. M. Cooper, 24 Citty Ex., B'st'n.
Hamilton,	20,000	500,000	SE¼ Sec. 35, S½ Sec. 36, T. 50, R. 41, SW⅛ Sec. 21, R. 20, 14¼ A.,	J. B. Townsend, 44 Exchange, N. Y.
Hancock,	20,000	500,000	SW¼ Sec. 26, Tract of Sec. 25, T. 5, R. 34, W.,	Fred. Beck, 43 City Ex., Boston.
Hanover,	20,000	500,000	Michigan,	do. do. do. do.
Hartford,	20,000	500,000	320 A. E½ & SE¼ Sec. 32, SW¼ & W½ Sec. 33, T. 50, R. 40, W,	T. M. Tyng, 61 Cedar St., Boston.
Henwood,			Michigan,	57 Broadway, N. Y.
Hope,	20,000	500,000	240 acres in T 57, R 32, Kw co.	19 Nassau St., New York.
Humboldt,	20,000	500,000	Sec. 21, T. 53, R. 31, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Huron,	20,000	500,000	Sec. 2, T. 54, R. 34, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Hilton,	20,000	500,000	Michigan,	W. H. Smith, 51 Ex. Place, N. Y.
Indiana Copper,	20,000	500,000	Michigan,	25 Nassau st.
Isle Royale,	20,000	1,000,000	NW¼ Sec. 1, T. 54, R. 34, W,	F. W. Chapen, 33 Ex. Pl. Boston.
Keweenaw,	20,000	500,000	Michigan,	F. W. Chapen, 44 Ex. Pl., Boston.
Knowlton,	20,000	500,000	SE¼ Sec. 1, W¼ of SW¼ Sec. 1, and other lands,	44 Ex. Pl., N. Y.
Lafayette,	20,000	500,000	Secs. 25, 30, 36, T. 51, N. R. 43, and 44, W, Ontonagon,	P. C. Blancan, 35 Wall St., N. Y.
Lyster,	200,000	$400,000	Township Nelson, Canada East,	H. W. Nelson, 24 City Ex., B'st'n
Lower California	40,000	2,000,000	N. part of Lower California,	55 William St., N. Y.
Madison,	20,000	500,000	Part sec. 18, 19 entire. 30, 31.	Fred. Beck, 43 City Ex., B'st'n.
Merryweather,	20,000	500,000	Secs. 9, 19, T. 48, N. R. 4, W,	J. T. Waters, New York.
Mandan,	20,000	500,000	680 A. Secs. 8, 17, 19, 30, T. 58, N. R. 29, W., Keweenaw co., Min.,	B. A. Hoopes, 324 Walnut, Phil.
Manhattan,	20,000	500,000	W½ Sec. 11, NW¼ Sec. 14, T. T. 58, N. R. 32, W, 360 A.	J. W. Davies, 21 Nassau St., N.Y.
Mendotta,	100,000	500,000		M. Taylor, 30 Wall St., N. Y.
Mass. M. Co.,	20,000	500,000	SW¼ Sec. 7, T. 50, N.R. 38, W,	J. M. Cooper. Pittsburgh.
Mesnard,	20,000	500,000	NE¼ Sec. 24, T. 55, R. 34, Calaveras co.,	L. Burr, 12 Phœnix B'gs, Boston.
Melones & Stan.,				606 Mont St., San Francisco.
Minnesota,	20,000	1,000,000	Sec, 15, T. 50, N. R. 39, W,	S. M. Pond, 12 Pine St., N. Y.
Maryland,			Maryland,	Baltimore.
Medora,	20,000	250,000	Michigan,	Pittsburgh.
Michigan,	20,000	300,000	Michigan,	W. H. Smith, 51 Ex. Place, N.Y.
Merrimac,	20,000	500,000	NW¼ Sec. 34, T. 51, R. 38, W, Ontonagon,	J. M. Mills, 284 Pearl St., N. Y.
National,	20,000	300,000	Sec. 16, T. 50, R. 39, W, 1.988 A.	J. M. Cooper, Pittsburgh.
Nequakett,	20,000	500,000	Sec. 26, T. 51, R. 43,	
New Burra,			Baltimore,	R. Robarts, 19 Nassau St., N. Y.
New Jersey Con.	100,000	1,000,000	New Jersey.	W. Bowes, 68 Wall St., N. Y.
N. Y. & Passaic,	100,000		Harrison, Bergen c.,	T. H. Belt, Jr. 23 William St. N.Y
New Devon,				T. H. Belt, Jo, do. do.
North Western,	20,000	300,000	W½ Secs. 24, 25, 26, E½ Secs. 36, 35, T. 58, N.R. 31,	17 William St., N. Y. J. M. Cooper, Boston and Detroit.
North Cliff,	20,000	200,000	Michigan,	Pittsburgh,
Norwich,	20,000	500,000	Secs. 11, 12, T. 40, N.R. 39, W, and other lands, 1,300 A.,	P. C. Blancan, 35 Wall St., N. Y.
Ogima,	20,000	500,000	NW¼ Sec. 6, T. 50. N.R. 33, W.	G. E. Leffingwell, 7 Pine, N. Y.
Ontonagon,	20,000	500,000	631 A. Secs. 20, 21, 28, T. 50, N. R. 39, W. Rockland,	G. Hart, 11 Pine Street. N. Y.
Otisville,	100,000	500,000	Otisville, Orange co., N. Y.,	C. Windsor, 69 Wall St., N. Y.
Penn. Manuf'g.,	20,000	1,000,000	4,320 A. Secs. 13, 14, 15, 24.	
Petherick,	20,000	500,000	Michigan,	Boston,
Phenix,	20,000	500,000	Michigan, ½ Secs. 10, 11, 12, 23, 25, T. 58, N. R. 30, W.	Boston, S. M. Day, 326 Walnut St., Phil.
Pewabic,	20,000	500,000	W½ Sec. 25, T. 55, N.R. 34, W.	C. Emery, 39 State, Boston.
Pitts. & Boston,	20,000	150,000	Ts. 58, 57, N. R. 31, 32, W. 12,495 A.,	H. A. Johnston, Pittsburgh.
Pontiac,	20,000	500,000	SE¼ Sec. 13, T. 55, N. S. 31, W.	C. Emery, Kilbey St., Boston.
Prescott,	100,000	1,000,000	Central Arizona,	69 Broadway, N. Y.
Providence,	20,000	500,000	240 A. in Keweenah co., NW½ Sec. 10, W½ NW¼ Sec. 10, T. 57, R. 32, W,	J. W. Davis, 21 Nassau St., N. Y.
Phila. & Boston,	20,000	500,000	640 A. Sec. 14, T. 58, N. R. 28, W. Keweenaw co., Mich.	J. S. McMullin, 423 Walnut St., Boston.
Quincy,	20,000	500,000	Sec. 26, T. 54, N. R. 34, W,	W. H. Smith, 51 Ex. Pl., N. Y.
Republic,	8,000	200,000		H. Baldwin, 70 Wall St., N. Y.
Reliance,	20,000	500,000	Secs. 21, 22, 27, T. 58, N. R. 28, W, 10,785 A.	H. K. Thomas, 11 Wall St., N. Y
Rochester,	200,000	500,000		J. A. Ferguson, 8 Wall St., N. Y.
Rhode Island,	20,000	500,000	Michigan,	New York.
Ridge,	20,000	500,000	Sec. 35, T. 51, R. 38, W,	51 Exchange Place, N. Y.
Rockland,	20,000	500,000	Sec. 11, T. 50, R. 39,	S. J. W. Barry, 71 B'way, N.Y.
Resolute,	20,000	500,000	1,120 A. Secs. 7, 18, 19, T. 58, N. R. 29, W. Keweenaw co., Mich.,	
St. Mary,	20,000	500,000		F. Beck, 45 City Ex., Boston.
St. Margaret,	200,000	1,000,000	Canada,	E. B. Sutton, 43 Pine, N.Y.
Saint Clair,	20,000	500,000	Michigan,	Boston,
Sharon,	20,000	$500,000	Ontonagon co., Mich.,	P. C. Blancan, 35 Wall St., N. Y.
Sheldon & Col.,	20,000	500,000	SE¼ Sec. 36, T. 55, R. 34, W, SE¼ Sec. 34, T. 55, R. 34, W,	S. J. Edwards, 22 W'm. St., N. Y
South Side,			T. 58, 59, N. R. 28, 30 W,	H. W. Nelson, Boston.
Societe Fran'se,	10,000			Copper Harbor.
Superior,	20,000	500,000	W¼ Sec. 14, T. 50, N.R. 39, W,	S. J. W. Barry, 12 Pine St., N. Y
Toltec Consol.,	20,000	500,000	Secs. 25, 26, R. 50, R. 36, Wisconsin,	H. W. Nelson, Boston. 17 William St., N. Y.
Ural,				
Vulcan,	20,000	500,000	1,120 A. Secs. 7, 17, 18, T. 58, N.R. 27, W. Keweenaw co.,	F. K. Womrath, 324 Walnut, Phil.
Victoria,	20,000	500,000	Secs. 20, 29, 30, 34, 34, T. 50, R. 39, and other lands,	L. W. Clarke, Boston.
W. Minnesota,	20,000	500,000	Secs. 17, 18, 19, T. 50, N. R. 39, W.	C. T. Howard, Boston.
Wickopee,	100,000	500,000	Massachusetts,	G. A. Sneden, 12 PineSt., N. Y
Vermont,	100,000	500,000	W. Fairlee, Orange co., Vt.,	191 B'way, N. Y.
Wanda Yuma,	600,000	6,000,000	Arizona,	35 William St., N. Y.
Winthrop,	20,000	500,000	Michigan,	Boston.

S, means section; T, townsip, R range.

AMERICAN
Journal of Mining.

[ILLUSTRATED.]

GEORGE FRANCIS DAWSON,
EDITOR

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NEW YORK, SATURDAY, OCTOBER 6.

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TO SUBSCRIBERS.

Those of our half-yearly subscribers whose term of subscription has expired, and who desire to renew the same, should do so *at once*, as we cannot always give them back numbers of the JOURNAL OF MINING, owing to the great demand for bound volumes—which we keep for sale at $3.25 per volume. Subscribers desiring to have their files of the JOURNAL neatly bound can do so by forwarding same with $1.00 and the amount of postal charges, to and from this office. Half morocco, cloth and gold, $1.50.

RETURNING CONFIDENCE IN OUR MINES—A GLANCE AT THE "SITUATION."

The Mine share market appears to have thrown off the apathy which, during the summer months, afflicted it, and we now hear daily of large transactions at fair figures. We are glad to note that the pulse of the stock market beats so evenly, that the fever heat is gone, that the healthy action is confined to no one locality, but permeates the whole body, so to speak. Not California, nor Nevada, nor Colorado, nor Michigan, nor Montana alone, but all these and more too, are in good estimation. And there is abundant cause for it. Besides the recent more than ordinarily successful working of established gold mines in California, Colorado, Montana, Oregon, Idaho, and Nevada, new ones of more or less promise have of late been discovered—not alone in these States and Territories, but in others that had previously, to a great extent, been overlooked; for instance, near Great Salt Lake City, Utah; in New Mexico; in Arizona; in Maryland, near Great Falls of the Potomac, said to assay from $40 to $2,500 per ton; near Cleveland, Ohio; near Lisbon, New Hampshire, where there is said to be quartz that yields $867 in gold and $150 silver to the ton; at or near Dahlonega, Georgia, where fine placere diggings and quartz lodes exist; in Virginia, where an auriferous quartz mine was last week sold for $50,000; and in North Carolina, where it seems there is a regular network of veins, bearing a very superior quality of gold in profitable quantity. In silver, there have also been some notable discoveries made of late in the Reese River and other districts of Nevada; in the Snake River and Argentine districts of Colorado; in the neighborhood of Superior City, Wisconsin; in North Carolina and elsewhere—without mentioning the steady success and increased yield of many of the older silver mines. The large yields of some of the Michigan mining companies have created increased interest in copper, and new discoveries within California, Arizona, Colorado, and even New Jersey, have attracted marked attention, although perhaps unmerited in the case of the last-named State, where the ore seems to be too much broken up to amount to any defined lode. Then as to lead: Wisconsin, Illinois, Missouri, and Northern Louisiana—where a 33 ton solid block of the pure article was recently found—are all making a good show. We have heard of no particularly new *available* discoveries of iron; but the iron mines of Pennsylvania, Ohio, Michigan, New York, Missouri, New Jersey, Massachusetts, Maryland, North Carolina, Virginia and Tennessee are all more than usually active and promising. In coal, Pennsylvania shows a constantly increasing yield, induced doubtless by the growing appreciation of anthracite for certain purposes. We see, also, that California (Mt. Diablo) coal is selling cheaply to a ready market on the Pacific slope, and that of Bellingham Bay also is well esteemed. In larger or smaller quantities coal has recently been discovered in Illinois, Nevada, and Oregon. In petroleum, too, since the repeal of the odious tax on crude, many new discoveries have been made and much has been doing; but it will of course be a long time before the almost fatal wound can thoroughly heal. Altogether, we may say without exaggeration, that whether in the mining for gold, or silver, or copper, or iron, or coal, the prospects were never so good in the United States as they now are; and we are glad to see the revival of confidence, indicated by the present activity in the Mining stock market. Confidence begets both capital and labor, and these again, if controlled and guided by cautious experience, must indubitably, in mining, as in any other business carried on in a legitimate manner, prove successful.

AN "UNAPPRECIATED" DISTRICT—WHY DOES'NT SOMEBODY GET EXCITED OVER IT?

The Reese River *Reveille* while stating that the discoveries made during the past year in the neighborhood of Austin, Nevada, "undoubtedly exceed in extent and value anything of the kind ever before made known in the United States," marvels greatly that nobody is excited over it, and adds: "It is not natural that this condition will continue." Now, even assuming the former assertion to be true, we cannot help thinking the latter assumption incorrect. We think it a *very* natural and proper thing that no one gets excited over recent Reese River or any other especial discoveries; and we think so because there are so many of them now-a-days, that ordinary people are bewildered, and not knowing which is really and truly best to invest in, go to the nearest, or else to none. But, recurring to the first-named statement: while we are quite satisfied that the discoveries and developments near Austin are really remarkable, yet we are equally satisfied that they do *not* "exceed in extent and value" many others that might be named; and we are of the opinion that it is a very unwise course for any journal to make such sweeping assertions. Facts are what are needed to induce an influx of capital—facts of the right sort, too. Not mere statements that this District has wonderfully rich lodes, nor that rock from this man's mine in that District assayed so many hundreds or thousands of dollars to the ton. Such statements may do for some few persons who are blessed with more money than brains, but are of no earthly avail with solid capitalists, sensible business-men. Time was, when even they, to some extent—and to their sorrow—were influenced by gold excitements, silver fevers, petroleum epidemics, but that time has passed, we hope, for ever. Stern lessons were taught in those periods of lunacy, not soon to be forgotten. The excellent consequence now is that sensible people who have money to invest in gold and silver mines, want to know how much the rock will *average by working-test, in quantity?*—How much it costs to get the rock out of the mine?—How much to get the gold or silver out of the rock?—What average quantity of rock can be taken daily out of the vein? How long will said averages of yield, cost, etc., last? Answers to such questions as these are what capitalists require instead of flaming announcements and empty boasts. Our Reese River friends may console themselves with the reflection that, if they really have the most valuable mines, they will certainly, in due time, secure the most capital, for capital naturally gravitates towards the best opportunities for investment.

"Mining Stocks are Dull."

San Francisco mining stock dispatches to the Associated Press more frequently commence with the above four words than with any others, and from internal evidences we should judge that they are not always correct. For instance, the dispatch dated San Francisco, Oct. 3d, commences in that manner, and then gives the quotations thus:

Chollar, $118; Yellow Jacket, $742; Imperial, $84; Ophir, $190; Savage, $1.130.

Turning to our San Francisco telegram of Sept. 26th, just one week before, we find the same stocks held at the following figures:

Chollar, $110; Yellow Jacket, $670; Imperial, $85; Ophir, 200; Savage, $1.110.

So that while during the week ending October 3d, there had been a falling off in Imperial of $1, and in Ophir of $10, Chollar had advanced $8, Savage $20, and Yellow Jacket $72! With such advances in the amounts bid per foot, we should think that there must have been considerable activity in *those* mining stocks at any rate, unless they were run up by dishonest practices; but even in that case the telegraph agent would be none the wiser.

Montana Looming Up—"Millions for Defence."

Some of our Western exchanges, while blowing the trumpets of their own special regions, disparage others, and particularly Montana, which is declared to be "a failure," from which miners are returning disgusted. But Montana seems to believe more in deeds than words, and while decided to pay "not one cent for tribute" to her enemies, sends "millions for defence," as will be seen by the following telegram:

St. Louis, October 4.—The steamer Jenny Brown, from Montana, arrived at St. Joseph on Tuesday, with about one million dollars in gold-dust on freight and in the hands of the passengers. Yesterday the steamer Lulala arrived at the same place with a million and a half in treasure, besides a large amount in the hands of the passengers.

What will her enemies say to this?

A Mountain of Salt.

Washington correspondence alludes to specimens of salt sent to the Postmaster-General from the district of Pahranagat, in the State of Nevada, which are said to have been taken from "a mountain of pure salt, several layers in extent and several thousand feet in height." Through salt blocks of a foot square a newspaper can be read, they are so transparent. This salt deposit must prove of great value to the district, as it is largely used, in many processes, for the treating of silver ore.

SCIENTIFIC MEETINGS.

POLYTECHNIC MEETING - FIRE-PROOF GLOVES—A NEW FUEL AND WHAT IS CLAIMED FOR IT.

At the meeting of the Polytechnic Institute on Thursday evening, a glove of Hungarian make was exhibited. It is of asbestos, which the maker professed is adapted to enable an assayer to hold a heated crucible, but which the exhibitor had not tested. The cost was $20 per pair.

Mr. Lester exhibited a specimen of patent fuel, which he said could be delivered in New York at $2 per ton, and which would cost at no place in the States more than $3. Peat, the basis of the fuel, was found abundantly in all the States of the Union. He stated that it had twice the heating property of anthracite, taking bulk for bulk. It had 13¾ per cent. greater specific gravity than anthracite; and while ordinary anthracite left 18 to 40 per cent. ash, the patent fuel never left less than 3, nor more than 6 per cent. Besides this, there is a great saving in stowage, on account of the square blocks. Thus, a steamer which now carries 1200 tons anthracite, in crossing the Atlantic would save half the space now taken up by coal, and carry in lieu thereof paying goods. The importance of the new fuel on the San Francisco and China route would be still greater. This fuel had been the object of study for Mr. Halstead and himself during the past two and a half years. They had made above 1300 speculative trials, were themselves perfectly satisfied as to its success, and were constantly burning it under their small boiler (165 galls.,) at Trenton, New Jersey, where it started the engine in seven minutes. It had also been used during a run of forty miles by a steamer on the river, when the saving of kindling-wood, usually employed in starting the anthracite, came to more than the cost of patent fuel. The Pacific Mail Steamship Company had offered them one of their steamers for a trial-trip to sea, and in a few days he would send invitations to the members of the Institute to accompany it. The fuel is thus composed: Sixty to sixty-five per cent. of peat, about twenty per cent. of anthracite dust, ten per cent. coal tar, five per cent. asphaltum, but varying in proportion for different purposes, whether metallurgical, domestic, or other. The peat, dug in the usual manner, is laid in the air to dry; and when dry enough to be mixed with the other materials into an amalgam, it is put into a press, and with one blow compressed. Next day it is ready for use. It can be prepared by any farmer. Dr. Stevens objected, that since the value of fuel was reckoned by the quantity of carbon it contained, and since peat possessed much less carbon than anthracite, he could not see how peat and anthracite together should produce greater heat than anthracite alone.

NEW PUBLICATIONS.

National Quarterly Review—Vol. XIII. No. XXVI. September. 1866. New York: Edward J. Sears, Editor and Publisher.

The present volume of this valuable Review is unusually able and interesting, judging from the cursory glance we have given it. The titles of the articles are: The Julius Cæsar of Napoleon III.; the Philosophy of Death; Arabian Civilization, and What We Owe It; Newton and his Discoveries; Our Colleges and Our Churchmen; Irish Law and Lawyers; Sample of Modern Philosophy; The National Convention and its Work; and Notices and Criticisms.

American Exchange and Review. Forster & Moon, Philadelphia.

The September number of this sterling monthly contains articles on Mazzini; The Eye and the Light; Cotton and its Manufactures; American History; Witchcraft in Great Britain; Mining and Metallurgy; Monetary Matters; Insurance; Railways and Transportation; Patents, Arts and Science; Notes and Comments.

Benedicts' Time Tables.—The October number of this valuable little pamphlet, published by Benedict Brothers, 171 Broadway, has reached us. It gives the revised time tables of the Post Office, Railroads, Steamboats, and Ferries, location of piers, with particulars as to fares, routes, etc., so necessary for travellers and others to know.

MINING COMPANY STATEMENTS.

James M. Cooper, Secretary and Treasurer of the North-Western Mining Company, of Detroit, has issued for stockholders a circular containing the following (to them) very important information: "Recent developments at the Copper Fall Mine have so important a bearing upon the interests of this company, that after a personal investigation of the facts, the Secretary and Treasurer has been instructed by the directors to communicate them in this form for the information of stockholders. The Owl Creek vein, as it is called at the Copper Falls, has been worked with but moderate success for a number of years, until lately in driving south of the Ash Bed into a belt of Amygdaloid, towards the North-Western, the vein was found to be highly productive, yielding heavy mass copper in great abundance, besides widening out in some places as much as twenty feet, well filled with barrel work and stamp copper. Some sixty tons of masses were thrown down at a single blast in the sixty fathoms level, leaving very large deposits of the same description of mineral still standing in the drift. I am under great obligations to Mr. Thomas, the gentlemanly agent of the Copper Falls, for much kindness and attention, in affording me facilities for an examination of his mine, with reference to the direction of the lode towards the North-Western. The line of the vein having been run out, it is found that it is identical with the lode upon which a shaft was sunk about seventy to eighty feet in depth on the east side of the North-Western property some years ago. This lode passes through our north quarter section, into and through the Greenstone, giving us fully five-eighths of a mile upon its course, and not less than 1,500 feet south of the Greenstone, where it probably enters the Dana property. We should therefore hold about the same relation to the Owl Creek vein that the Cliff Mines does to the great lode which has been productive of such grand results there, with the same advantages of working under the Greenstone indefinitely. The opinion has heretofore prevailed, that the richest deposits of copper in the transverse or North and South veins are to be found immediately south and under the Greenstone, as at the Cliff Mine, and if this belief is sustained, the Owl Creek lode at the North-Western will in all probability become a source of great profit to the stockholders. Besides the important facts just referred to, it is the general opinion of good mining men, conversant with the subject, that the old North-Western Mine would pay handsomely if it was properly equipped with the necessary stamping machinery. The company is entirely free from debt, and has two engines in good repair, tools and other machinery, and dwelling houses, (the latter rented at present to the Central Mine), together with an available balance in the treasury of $6,650.

MEETINGS.

Meramec Silver Lead Co., of Missouri, election of officers, at 25 Nassau street, N. Y., on Oct. 16, at 12 M. Ophir Gold Mining Co., election of Trustees, at 70 Broadway, on Oct. 9, at 3 P. M. Ashburton Coal Co., to increase works and production, at 38 Broad street, N. Y., on Oct 15. Rathbone Oil Tract Co., election of Directors, 69 Wall street, on Oct. 8, at 12 M. Anderson Petroleum Co., election of Directors, at 25 Pine street, Oct. 9, at 1 P. M. Titus Estate Petroleum Co., election of Trustees, at 74 Broadway, Oct. 8th. Story and McClintock Petroleum Co., election of Trustees, at 74 Broadway, on Oct. 8, at 1 P. M. Noble Farm Petroleum Co., election of Trustees, at 171 Broadway, on Oct. 8, at 10 @11 A. M.

DIVIDENDS.

Mount Pleasant Coal Company $1 per share; Roaring Brook Co. six per cent., both payable at Boston. The Ocean Oil Co. has declared a dividend of 2½ per cent., and the McClintockville Petroleum Co. of 1 per cent., each payable at the office of the company in Philadelphia.

Correspondence.

[To insure insertion of Correspondence in our columns the full name and address of the writer must be given.]

Letter from Professor Wurtz—Sodium-Amalgam Experiments at the Gould & Curry Mill—20 Per Cent Increase of Yield.

57 Broadway, N. Y., Oct., 1, 1866.

Editor Journal of Mining:

Sir—My communication, made to the American Association, at Buffalo, having appeared in your columns, it has become incumbent upon me to give the substance of some later advices received, which modify to some extent the statements in the said communication relating to the experiments in progress at the Gould & Curry mill, in Nevada. My previous information was partly at second-hand, but that which I now present is direct from headquarters. It appears that the efforts to manufacture sodium at this mill were discontinued; a result easy to anticipate by one aware of the peculiar difficulties to be encountered in making sodium; difficulties which, as I can readily comprehend, must be so greatly enhanced in a remote mining district that even Mr. Moore's well-known chemical skill might not suffice at once to overcome them. Our new and rapidly developing Sodium Works, however, will soon render superfluous any such efforts to produce this metal locally on a small scale:

Gould & Curry Assay Office,
Virginia, August 14, 1866.

Dear Sir—Your favor of the 10th inst., relative to the experiments on the sodium-amalgamation process made at the Gould & Curry mill, was duly received.

The experiments in question were made with sodium prepared for that purpose at the laboratory of the G. & C. Assay Office, before any of the metal could be purchased in California. They were intended to form part of a thorough and systematic inquiry into the merits of the process. But, after two experiments had been made, the preparation of the sodium was found to be so troublesome and to interfere so seriously with the current work of the office, that the experiments were discontinued until the metal could be obtained from other sources. It was also found impracticable to conduct the experiments in the pans used for the general mill-work, and it was intended to put up a couple of pans of the largest size, in a room separate from the rest of the mill, for that express purpose. The pans in question have recently been received and will shortly be put in operation. We have received through the kindness of Prof. Silliman, about 50 lbs. of the *hard* sodium-amalgam,* which, with a quantity of the metal itself purchased by the G. & C. Company, will be employed in the experiments. When the course is complete, I shall be very happy to furnish you with the result, including all of the details of working.

The first of the two experiments to which you allude in your letter, was made in the Varney Pan heated with steam, and with no "chemicals." The result was highly satisfactory, showing a gain in metal extracted of about 20 per cent. over the ordinary process, while the amount of mercury lost was about the same. The second experiment was made in the Hepburn & Peterson Pan, using *no* steam or "chemicals." The result in this case was unsatisfactory, showing a smaller yield than by the ordinary process. Very sincerely yours, Gideon E. Moore.

*This was sent from our works, by advice of Prof. S.

I have presented the *results* only of Mr. Moore, who is the chemist of the Gould & Curry Co., omitting his deductions; as each practical man will prefer to make his own inferences from the facts. The most important comment I would myself wish to make is that I should confidently expect, on repetition of the first experiment with the steam-heated Varney apparatus, to better the results still further; on the ground that some *loss of quicksilver* (that is, of pasty and floured silver-amalgam,) is implied to have still occurred; whereas I have always found it easy, with a little practice, to recover all the floured, amalgam from a pulp, strictly *without any loss.* I wish also to remark that the result with the Hepburn pan, being merely a *negative* result, cannot be justly regarded as arguing anything but absence of some condition to success, which would probably be easily discovered by a little further experiment. We expect soon to have results with the Hepburn and Peterson pan to present, which will at once remove all doubts as to the value of sodium in this form of apparatus. Henry Wurtz.

More About Hazel Wands, erc., "Puebla" Answered.

Editor Journal of Mining:

Sir—Your correspondent, "Puebla," will get further light upon his ideal "Hydrogeology," by adding the following to his propositions:

1st. That it makes no difference what timber the soothsaying rod is cut from, nor whether it is green or dry.

2nd. That whalebone or wire is equally as good.

3d. It will work equally as well in any one's hands.

4th. And on the Desert of Sahara for water as on the ocean, or for gold in Wall street as well as in mines; operates as well for lead as gold, copper as lead, clay as gold.

5th, and lastly. That the twisting or turning of a rod—held firmly in one's hands—is simply due to a strain upon the cellular tissue or vegetable fibre—and not to any attraction of any kind whatever.

Superstitions will live—they go on through the ages. The soothsayer and confidence man is sought for to-day as much as in the days of yore, before science had taught the multitude. S.

Original Papers.

[WRITTEN FOR THE JOURNAL OF MINING.]

THEORY OF THE ORIGIN OF PETROLEUM.

By J. Van Cleve Phillips, M. E.

In an examination of the stratified rocks of the Valley of the Mississippi, or basin of the continent, the Potsdam sandstone is found five hundred feet deep below the Mississippi river, at Dubuque, Iowa; one thousand five hundred feet deep in Belcher's Artesian well at St. Louis; five hundred feet below the Ohio, at Cincinnati; one thousand five hundred feet under Pittsburgh; one thousand feet under Chicago; rising to the surface of the country in the great pineries of Central Wisconsin, and is the rock forming the great dividing ridge known as the Ozark Mountains, in South Missouri. This rock evidently reaches its greatest depth from the surface of the country in the centre of the great coal basins under the grand

prairies of Illinois, and the great coal fields of North Missouri, Southern Iowa, and Eastern Kansas—also comes to-day, in Eastern Tennessee, along the Alleghany range, and in the State of New York. This rock was once the floor of an ocean. All the stratified rocks above, which now form the lead and coal measures of the great continental lead fields of Wisconsin, Iowa and Missouri, and the coal basins of this great valley (being, in the aggregate, five thousand feet thick,) were piled, atom by atom, on the floor of this ocean. Each of the strata has entombed in it the animal life that lived in the era in which it was being deposited. In walking along the shelving rock, seen at low water-mark along the Mississippi river opposite Dubuque, for miles may be seen in the weather-worn slabs of the blue limestone (the lower sill of the lead measures) fossil animals from an inch up to six feet in length—showing an outline of the animal life that swarmed in the waters of this part of the ocean at the time the blue limestone was being laid down. In the St. Louis limestone, the rock immediately below the coal measures, and the rock on which the city of St. Louis is built, can be seen the fossils of the animal life that lived in the waters of this ocean at the time this rock was being laid down. As we rise to the lower, middle and upper coal series, the record of the animal and vegetable life that existed is marked in each plane of these coal measures. These stratified rocks were all deposited and laid down prior to the mapping out and abrasion of the vallies of the river-systems. We find that to produce the present physiognomy of the lead and coal fields, a vast amount of stratified rock has been removed by the abrading forces of air and water. A vertical section of the strata drawn across the Mississippi river at Dubuque, shows that six hundred feet of limestone rock has been abraded—three hundred feet at St. Louis, five hundred feet at Cincinnati, five hundred feet at Pittsburgh, from three hundred to eight hundred along the line of the Mississippi river, from Cairo to St. Paul; from two hundred to five hundred feet from Cairo, along the valley of the Ohio, to Pittsburgh; from two hundred to three hundred feet along the vallies of the rivers which flow through and out of the great coal fields—the Mississippi, Missouri, Illinois, Wabash, Desmoines, Osage and others. The question might be asked, What has become of this vast amount of sediment or detrital matter? The commonly received theory is, that all the changes seen on the earth's surface have been produced by causes now in action. And if we follow the sedimentary matter now daily carried out of the mouth of the Mississippi river, we may reach some clue to the transportation of this sediment in earlier ages. Millions of cubic feet of silt, worn down from the hills and vallies of the Mississippi river and its branches, are carried out daily by this stream to the Gulf of Mexico. This sediment is there drawn into the gulf stream, and swept north towards the banks of Newfoundland—turns east across the Atlantic towards the western coast of Spain, and is swept round southwest in a vast eddy, and over the floor of the central part of the Atlantic. This sediment, in comparatively still water, is being precipitated there, forming stratified rock—the same causes having at one era gone on when the Potsdam sandstone was the floor of an ocean—and all the stratified rocks from that floor for six hundred feet above the present site of Dubuque, five hundred feet above the city of Cincinnati, three hundred feet above St. Louis, and from two hundred to five hundred feet above other cities and towns along the rivers of this great basin were piled, atom by atom, above that floor. The abrasion of these river vallies was necessary to throw the coal and lead measures in basins, and inaugurate a valley ridge and drainage system. (For an explanation of the forces marking out and abrading the vallies of the rivers, see my three fixed laws to the Dynamics of the lead fields of the Upper Mississippi, published first in February number of *Mining Magazine*, New York, 1854, and recently republished in JOURNAL OF MINING). The amount of solid coal veins cut out to establish this drainage system, has been very great—opposite St. Louis three coal veins ten miles wide. Along the Mississippi, Missouri, Illinois, Ohio, Desmoines, Osage, and other rivers that drain the coal fields, coal veins from two to five in number, and from three to ten miles wide, have been abraded and cut away, to form the vallies through which these rivers now flow. The question that presents itself is, What has become of the vast amount of bitumen and oil that once existed in this coal, and must we not look to this as the source of supply of the oil of our petroleum regions? Oil is known to exist to a greater or less extent in all bituminous coal and shales of the coal fields. We discover in the abrasion of the vallies, that something like one-fifth of the original coal strata has been cut away; and if we can show how the bitumen and oil once in these coal veins could have been preserved and deposited in fissures in the Devonian rocks, we shall have a key to the great oil belts of the country. Dr. Kane, in his Arctic Exploration, speaks of a recent coal formation, where the vein was being abraded and was consuming, as exposed, by spontaneous combustion, and burned by a kind of smouldering fire, following along the coal vein when exposed. We suppose, at one era in the abrasion of the coal strata, as the veins were brought to-day along the lines of our great rivers, that the coal was fired by spontaneous combustion, and burned by a kind of smouldering fire, for hundreds of miles along the lines of anticlinal axes, now followed by the Mississippi, Missouri, and other great rivers of our continental coal fields, that the oil by this smouldering fire was driven out, and settled in reservoirs in the Devonian rocks prepared by the economic laws to receive and preserve it. We must suppose the conditions on the surface of the earth at that time widely different from what they are at present; that the ocean was thermal, and the pressure of the atmosphere different from what it is at the present era. If this should prove correct, *the amount of oil in a given district of country, will be in direct proportion to the amount of coal abraded and consumed to produce it*—also depending somewhat on the more or less favorable geological conditions of the country to receive and preserve it.

[Concluded in our next.]

MARKET REVIEW.

FRIDAY EVENING.

Mining Stocks—During the week have been tolerably active. American Flag, which was quoted at $3.90 this day last week, was sold to-day at $4.05, but with few sales. Burroughs' gold was $1.15; sold on Wednesday at $1. Crozier gold was $1; sold to-day at 95c. Consolidated Colorado 35c.; sold on Wednesday at 44c., with considerable sales at the beginning of the week. Carydon $6 has risen to $6.25, with numerous transactions. Downieville gold $1.90. Gunnel gold has fallen to $1.21. Keystone silver stands at 18c. Kipp & Buell gold has risen from $1.25 to $2.25. La Crosse from $2.50 to $2.90. Liberty gold has falles to 36c. New York to $2.40. Quartz Hill has risen from $6.35 to $6.50. Smith & Parmlee from $11.80 to $11.90 Canada copper from 80c. to $1.45. Walkill lead, which rose from $2.85 to $3.40 yesterday, with many transactions, fell to-day to $2.40.

Petroleum Stocks—Have somewhat improved, but with few sales.

Government Stocks—Are firmer. Considerable sales of 5.20's of '62 for foreign account, and the price has advanced to 112 3/4; 6 per cent. '67, 137 1/2; '81, 111 7/8; 10.40's reg., 99; 7.30's 106.

		Offered.	Asked.
Coal Stocks.—Pennsylvania Coal		155	—
	Central Coal	52	53
	Cumberland Coal, preferred	54	—
	American Coal	—	—
	Wilkesbarre Coal and Mining	62	62 1/4
	Spring Mountain Coal	60	78

Foreign Exchange is unsettled. Bills on London at 60 days, 106 1/8@107 for commercial; for bankers', 107 7/8@108 3/8; for bankers' at short sight, 108 3/4@109 1/4. Paris at 60 days, 5.25@5.21 1/4. Hamburg, 35 1/4@36.

Gold.—The price is still rising. At two o'clock it was quoted at 149.

Silver is steady at 6 1/2@7 1/2c. below the price of gold.

Copper.—The demand is not so brisk for ingot, and the sales light; 50,000 lbs. Detroit at 31c.; 25,000 lbs. Portage Lake, 30 1/2c.; 50,000 lbs. Baltimore for December delivery at 31c.

Iron.—There is but little American pig offered. Scotch pig is firm, but without many transactions. The sales are 600 tons Scotch in lots at $47 for Eglinton, $48@$50 for Gartsherrie, $48 for Glengarnock ex-ship; 200 tons No. 2 at $45. There is a good trade in bar from store.

Lead.—Prices are firm. The sales, which are not numerous, include 150 tons foreign at $6 87 1/2; 50 tons German at $7. The stock on the 1st inst. was 1,700 tons, against 2,200 tons at the same time last year.

Tin.—The market for pig is quiet but prices firm at 21 1/2@22c. for Straits. The market in Europe is rather unsettled in view of the approaching sale of Banca. Tin Plates are in good demand, and the currency price stiffer in sympathy with the rise in gold. There is also an upward tendency in the English market.

Spelter is more active; price 6 1/2 gold. The price in London has advanced to £20 5s. per ton.

Petr leum is dull and lower at 25@25 1/2c. for crude; refined in bond at 40@43c., and free at 55c.

THE COAL TRADE.

FRIDAY EVENING, Oct. 5th.

One of those periods of stagnation which have at times seized the trade has control of the market. Trade is exceedingly quiet, and prices are but nominal. Good qualities are in fair demand, but the market is bad. The last auction sale has evidently had a tendency to create a lack of confidence in buyers, even were there a demand. The heavy trade done early in the season has supplied large consumers, and now that prices are considerably lower, those whose means compelled them to purchase when actually in need, are holding off in hopes of lower prices. The retail trade has been a little active during the past two days of cool weather.

We note sales of 350 tons Liverpool Gas Caking coal at $10 65 per ton. 160 tons English Gas Cannel at $14 00 per ton. 500 tons Locust Mountain steamboat coal at $6 25 per ton of 2240 lbs.

The returns of traffic for the week ending October 6, as compared with those of the corresponding week last year, are as follows:

	1865.		1866.		
	WEEK.	TOTAL.	WEEK.	TOTAL.	INCREASE
Schuylkill Canal	.....	699,445	21,992	1,029,894	330,449
Del & Hudson	19,015	492,894	34,930	1,029,909	437,015
Lehigh Val. R. R.	40,804	1,046,066	33,978	1,404,022	357,956
Lehigh Canal	.....	.....	.....	.....	.....
Pa. C. Co., by R. Road	.....	376,260	19,783	318,000	decrease 58,260
by Canal	.....		824		
Hunt'n & Broad Top R.	.....	.....	.....	.....	.....
Scranton North	2,889	137,113	9,772	317,466	505,91 0
Scranton South	2,992	470,812	23,488	796,369	

Report of Coal Transported Over Lehigh Valley Railroad, Week Ending September 29, 1866.

Where Ship'd From.	WEEK. Tons. Cwt.	PREVIOUSLY. Tons. Cwt.	TOTAL. Tons. Cwt.
Central Coal Co.			
Ashburton Co.		757 00	757 00
Mount Pleasant	351 11	18,400 12	18,752 03
Hazleton	5,244 04	159,249 04	164,493 08
East Sugar Loaf	3,873 14	145,515 18	149,389 12
Woodside Co.			
A. Pardee, Jr., Bro. & Co.			
Stout Coal Co.	1,253 18	35,905 17	37,159 15
Harleigh	1,132 01	40,578 11	41,710 12
Aberville Coal Co.	1,962 16	42,620 17	44,583 13
Jeddo (G. B. M. & Co)	2,844 07	111,597 05	114,441 12
Highland Coal Co.			
Coxe, Bro. & Co.	727 06	12,503 00	13,230 06
Council Ridge	2,192 06	72,149 00	74,341 06
Buck Mountain	1,249 12	43,950 01	45,199 13
N. Y. and Lehigh	751 19	52,177 00	52,928 19
Honey Brook	1,560 15	103,254 05	105,815 00
Ger. Pa. Coal Co.	565 17	41,165 10	41,731 07
Spring Mountain	2,972 18	107,958 19	110,931 17
Coleraine	549 16	24,819 18	25,369 14
B. Meadow D. W.		1,732 12	1,732 12
John Connery	84 11	3,072 19	3,159 10
Lehigh Zinc Co.		7,464 10	7,464 10
J. B. Reber & Co.		6,542 08	6,542 08
McNeal Co.	268 05	48,760 06	49,028 11
Knickerbocher	354 13	21,963 09	22,318 02
Coal Run Coal Co.		155 03	155 03
Rathbun, Sh'ns & Co.	712 01	30,364 10	31,076 11
Glendon Coal Co.		22,247 09	22,247 09
Mahanoy		10,935 14	10,035 14
Delano		24,920 01	24,920 01
H. Meyers	21 04	8,560 17	8,582 01
Trenton Coal Co.		129 16	129 16
Silliman	1,140 03	36,726 16	37,866 19
W. T. Patterson		220 12	220 12
Shamoking Coal Co.	756 08	1,061 04	1,871 12
Baltimore Coal Co.	541 17	26,226 03	26,769 00
Franklin Coal Co.	180 04	16,068 10	16,248 14
Audenried	84 08	13,758 15	13,843 03
Lehigh and Susq.	276 19	15,650 09	15,927 08
Germania Co.	210 09	7,971 13	8,182 02
Wilkes-Barre Coal and Iron Co.	761 02	48,946 00	49,707 02
Warrior Run	67 17	5,886 01	5,953 18
Farrish & Thomas	507 03	16,608 18	17,116 01
New Jersey	253 01	1,957 17	2,210 18
Union	157 14	415 01	572 15
Wyoming	111 00	2,042 19	2,153 18
Lehigh Coal and Navigation Co.			
Other Shippers	256 14	10,027 19	10,284 13
Total	33,978 13	1,404,022 08	1,438,001 01
Cor. week last year	40,804 06	1,046,066 18	1,086,871 04
Increase		357,955 10	351,129 17
Decrease	6,825 13		

Coal delivered at Mauch Chunk, and afterwards by rail	
Coal delivered on line of P. Haven and W. Haven Railroad	33,978 13
At Junction and at M. Chunk for shipment by canal	6,894 14
Total	40,873 07

NOTE.—The Coal carried by Lehigh Valley Railroad Co., and delivered to canal at M. Chunk, in 1865, was not included in the published weekly reports of that year.

Little Schuylkill Coal Trade to Saturday, Sept. 29.

	Co.'s Mines: Tons.	Railroad. Tons.
From December 1st, 1865	97,799	192,897
ame time last year	63,669	147,957
ncrease	34,130	44,941
East Mahanoy R. R.		316,657
Last year		361,034
Increase		55,623
Increase on Railroads		100,564

Schuylkill Coal Trade by Railroad and Canal for the week ending Thursday, October 4th :

	RAILROAD	CANAL.
From St. Clair	.....	.....
Port Carbon	.....	10,914
Pottsville	.....	589
Schuylkill Haven	.....	9,421
Auburn	.....	.....
Port Clinton	.....	1,076
Total for week	.....	21,992
Previously this year	.....	1,007,901
Total this year	.....	1,029,094
To same time last year	.....	609,445
Increase	.....	330,449

Cumberland Coal Trade for 1866.

(From the Alleghanian.)

COAL TRADE BY RAILROAD.—Statement of Coal shipments over the Baltimore and Ohio Railroad for the week ending Sept. 29 :

	Tons.
From Eckhart R. R.	
Blaen-Avon Company	221 14
Spruce Hill	18 02
Cumberland Coal and Iron Company	408 13
From Cumberland and Pa. R. R.	
American	1,332 18
Consolidation Company	1,215 10
Borden Mining "	309 10
New Hope	97 05
Total	3,975 12

GAS COAL.	Tons.
From mines west of Piedmont	1,260 00
Transportation since 1st of January	Tons. Cwt.
From Companies by Eckhart R. R.	35,975 14
From " C. and P. R. R.	95,296 04
From " via Piedmont	40,402 00
Total	608,630 11

From George's Creek via Piedmond	Tons.
George's C. C. and I. Company	1,231 15
Central " "	755 17
Atlantic " "	247 16
American " "	.....
Piedmont " "	1,541 03
Swanton " "	700 02
Barton " "	1,268 17
Potomac " "	1,106 98
George's C'k Mining "	361 10
Franklin " "	1,839 09
Hampshire " "	2,633 13
Total	11,776 15

COAL TRADE BY CANAL, for the week ending with Saturday, September 29th, and for the secson :

Companies	For Week. Boats.	Tons.	For Season. Tons.
Borden Coal Oompany	8	880	33,319
Consolidation "	0	00	9,792
American "	14	1,526	49,009
Central "	32	3,488	66,682
Cumb. C. & I "	19	2,090	37,353
New Hope "	10	1,120	19,136
Hamp. & Balt. "	17	1,870	25,282
Miscellaneous	11	1,232	16,714
Total	111	12,206	257,288

For the month of September 416 boats, containing 43,638 tons, cleared this port for Georgetown.

Prices of Coal by the Cargo

At New York, Oct. 5, 1866.

Schuylkill Red Ash by Boat Load	$7 00@	$7 25
" Chestnut, " "	4 50	5 00
" White Ash Lump	6 25	6 75
" Steamboat	6 25	6 75
" Broken	6 25	7 00
" Egg	6 50	7 00
" Stove	6 50	7 00
" Chestnut	4 75	5 25
Lehigh White Ash Lump	7 00	....
" Steamboat	6 75	....
" Broken	6 75	....
" Egg	6 75	....
" Stove	7 00	....
" Chestnut	5 75	....
Western Virginia Gas Coal	10 00	....

At Philadelphia, Oct. 5, 1866.

Schuylkill Red Ash Prepared	$5 50@	$5 75
" Chestnut	4 00	.. ..
" White Ash Lump and Steamboat	5 00	.. ..
" Broken	5 00	.. ..
" Egg and Stove	5 25	.. ..
" Chestnut	4 00	.. ..
Locust Mt. Lump, Steamboat	5 25	.. ..
" Broken	5 25	.. ..
" Prepared	5 50	.. ..
" Chestnut	4 25	.. ..
Lorberry Coal	5 75	.. ..
Shamokin	5 75	.. ..
Franklin. (Lykens Valley)	6 25	.. ..
Broad Top	5 50	.. ..

Scranton Coal at Elizabethport.

Lump	$5 25@	— —
Steamer	5 50	— —
Grate	5 60	— —
Egg	5 75	— —
Stove	6 50	— —
Chestnut	4 75	— —

Prices for Pittston Coal at Newburgh.

Lump, per ton of 2240 lbs	$6 75	.. ..
Steamer, " " "	6 60	.. ..
Grate " " "	6 40	.. ..
Egg " " "	6 50	.. ..
Stove " " "	6 75	.. ..
Chesnut " " "	5 25	.. ..

70 cents per ton additional for delivery at N. York

(The prices of Pittston Coal are merely nominal, the Company doing little at present.)

Lehigh Coal at Elizabethport.

Lump	$6 75@	— —
Steamboat and Broken	6 50	— —
Egg	6 50	7 00
Chestnut	5 50	— —
Stove	6 50	7 00

George's Creek and Cumberland Coal.

Run of mine, f. o. b. at Locust Point	$5 75@	.. ..
At Georgetown	5 50	.. ..

At Baltimore, Oct. 6, 1866.

Wilkesbarre & Pittston W A., wholesale	$7 50@	$7 75
" " " retail	8 50	8 75
Lykens Valley & Sunbury R A., wholesale	7 50	7 75
" " " retail	8 50	8 75

Prices of Foreign Coals.

[REPORTED FOR THE JOURNAL OF MINING.]
BY H. L. PARMELE & BRO.,
32 Pine street, N. Y.
Friday Evening, Oct. 5.

Liverpool Gas Coking	$10 65
" " Cannel	14 00
" House "	18 00
" " Orrel	16 00

Per ton 2240 lbs.

Prices of Provincial Coals.

[REPORTED FOR THE JOURNAL OF MINING.]
BY LOUIS J. BELLONI, JR.,
43 Pine street, N. Y.

Block House (on board)	$2 00 gold.
Gowrie	2 00 "
Lingan	1 75 "
Sidney and Picton	2 50 "
Glace Bay	2 00 "
International Co.'s	1 74 "
Slack Coal	75 "

Some coal from the Provinces has been sold as low as $7. currency, delivered.

Foreign Freights.

Sydney to N. Y.	$4 25
Lingan	4 50
Cow Bay	4 50
Glace Bay	4 50

Coal Freights.

From Newburgh.

Stamford	$1 35@	.. ..	Greenbush	$ 55@	.. ..
Norwalk	1 35	.. ..	Coeymans	50	.. ..
Bridgeport	1 35	.. ..	Coxsackie	45	.. ..
New Haven	1 35	.. ..	Stuyvesant	45	.. ..
New London	1 50	.. ..	Hudson	40	.. ..
Norwich	1 65	.. ..	Catskill	40	.. ..
Mystic	1 50	.. ..	Saugerties	40	.. ..
Stonington	1 50	.. ..	Barrytown	40	.. ..
Bristol	1 70	.. ..	Rhinebeck	30	.. ..
Newport	1 70	.. ..	Poughkeepsie	25	.. ..
Fall River	1 70	.. ..	Fishkill Landing	20	.. ..
Providence	1 75	.. ..	Cold Spring	30	.. ..
Dighton	1 75	.. ..	West Point	30	.. ..
Warren	1 75	.. ..	Peekskill	40	.. ..
Pawtucket	1 90	.. ..	Haverstraw	45	.. ..
Boston	2 00	.. ..	Sing Sing	50	.. ..
Troy	60	.. ..	Nyack	50	.. ..
West Troy	60	.. ..	Tarrytown	50	.. ..
Albany	55	.. ..	Yonkers	55	.. ..
New York	70	.. ..			

From Elizabethport.

New York	$ 70@	— —	Portland	1 50@	— —
Fall River	1 50	— —	Newburyport	2 20	— —
Newport	1 50	— —	New London	1 50	— —
Boston	1 50	— —	Pawtucket	1 70	— —
Norwich	1 50	— —	Taunton	1 30	— —
Providence	1 50	— —	New Haven	1 30	— —
Norwalk	1 25	— —	Portsmouth	2 00	— —
Middletown	1 40	— —	New Bedford	1 50	— —
Hudson	1 10	— —	Bridgeport	1 30	— —
Lynn	— —	— —	Hartford	1 65	— —
Salem	1 50	2 10	Albany	1 10	— —

From Port Richmond, Philadelphia.

Reported by the Coal Exchange, Oct. 4.

Albany (& towing)	$1 70@	— —	Neponsett	$0 00@	.. ..
Alexandria	1 60	— —	Newark	— —	— —
Appanang	2 00	— —	New Haven	1 80	— —
Aspinwall	7 00	— —	New London	....	— —
Bangor	2 00	— —	Newport	....	— —
Bath	2 00	— —	Newport, R. I.	— —	— —
Baker's Landing	— —	— —	New York	1 60	— —
Bedford	— —	— —	Norfolk	....	— —
Boston	1 75	1 80	Norwalk	....	— —
Bridgeport	1 80	— —	Norwich	1 90	— —
Bristol	1 90	— —	Parkshell	— —	— —
Cambridgeport	2 40	— —	Pawtucket, & tow'g	2 25	— —
Catskill (& tow)	2 00	— —	Petersburg	2 00	— —
Charleston, S. C.	2 25	— —	Portland	1,75	— —
Charlestown	2 10	— —	Portsmouth, N. H.	2 00	— —
Chelsea	2 00	— —	Providence	1 75	— —
Commercial Point	— —	— —	Poughkeepsie, & tg	1 70	— —
Cohasset Narrows	— —	— —	Quincy Point	— —	— —
Davenport	— —	— —	Richmond	2 00	— —
Dighton	2 00	— —	Rockland	2 25	— —
Dorchester Point	— —	— —	Roxbury	2 25	— —
East Cambridge	— —	— —	Saco	— —	— —
East Greenwich	1 75	— —	Saugus	2 50	— —
Fall River	2 00	— —	St. Johns (in gold)	2 00	— —
Fredericksburg	— —	— —	Salem	2 00	— —
Georgetown	1 50	— —	Savannah, Ga	2 00	— —
Gloucester	2 15	— —	Stonington	2 25	— —
Hudson	..	— —	Troy	— —	— —
Jantown and tow	..	— —	Washington, D. C.	1 50	— —
Kennebrook Point	— —	— —	Weymouth'g&pil'g	2 00	— —
Milton	2 50	— —	West Point & tow	1 70	— —
Malden	2 50	— —	Wilmington	2 00	— —
Medford	— —	— —	Winterport	2 00	— —

From Georgetown or Alexandria.

To Philadelphia	$2 00	— —	Boston	3 00	— —
New York	2 25	— —			

From Baltimore.

To Philadelphia	$1 75@	— —	Boston	2 50@	— —
New York	2 00	— —			
do by Canal	2 65	— —			

Canal Expenses from Mauch Chunk to N. Y.

Lehigh Canal (net)	58
Delaware Division Canal	42
Delaware & Raritan Canal	50
Towage, New Brunswick to New York	25
Freight, Mauch Chunk to New York	$1 55
Total	$3 30

Freights on Coal to Elizabethport.

L. V. R. R. from Mauch Chunk to Easton	$1 15
C. R. R. of N. J., Easton to Elizabethport	1 70
	2 85
Shipping expenses at Elizabethport	25
Total	$3 1

Via Morris Canal.

Lehigh Canal	58
Morris "	90
Towage	12½
Freight	$1 80
Total	$3 40½

Expenses from Mauch Chunk to Jersey City for Reshipment.

Lehigh tolls (net)	— 58
Morris tolls	— 75
Freights	1 75
Reshipping	— 30
Total	$3 38

WEEKLY COAL TRADE CIRCULAR.

NEW YORK, Oct. 5th, 1866.

The trade during the past week has developed no change from its previous condition of "masterly inactivity." Prices remain without change from the fact that many of the leading collieries have stopped, and the rates now current are below the cost of production ; so that it does not seem possible that coal can go any lower. The lessened amount of coal now coming forward finds purchasers at the present current rates. The cool weather will have its effect in increasing sales from yard by retail, and many think prices are likely to appreciate somewhat when the autumn trade really commences in earnest—which cannot be much longer delayed.

L. A. & Co.

FOREIGN MARKET REVIEW.

Weekly Metal Report.

LONDON, Sept. 14, 1866.

During the early part of the week the metal market showed symptoms of depression, but we are glad to say that a better feeling is now apparent, and prices of all metals show a hardening tendency.

IRON.—There is no alteration in the position of Welsh and Staffordshire. Finished iron orders are coming in gradually. Scotch pig iron, after declining to 54s. cash, has recovered to 54s. 9d.

COPPER.—The news by the last mail from the Pacific is considered favorable, and buyers have come forward for English and foreign copper at the following quotations: Barra, £89; Walleroo, £88 10s.; Chili, £81; best select, £89; tough, £86 to £87; according to prompt.

TIN.—After a temporary flatness, the price of Straits rules steady at £81 cash; Banca, £85. English tin obtainable a trifle under smelters' quotations. The Dutch market is dull at 47l.

TIN PLATES maintain their position well.

LEAD is in fair demand, but without change in value.

SPELTER.—The market has declined to £20 2s. 6d. on the spot, at which several parcels have changed hands; £20 10s. demanded for forward delivery. Special brands in outports, £20 10s. to £20 15s.

VOX DADELSZEN & NORTH.

Oil Trade Circular.

LONDON, September 14, 1866.

The market has shown no material change since our last report. The export orders, as well as home demand, continue very large, but the heavy stock prevents a great advance in prices.

REFINED PETROLEUM.—Liverpool and London, 1s. 11d. to 2s. 2d.

CRUDE.—Demand good at £17 per ton.

SPIRIT—Sells freely at 1s. 3d. per gallon.

LUBRICATING OIL.—£10 to £20 per ton.

REFINED COAL OIL—Of fine quality meets ready buyers at 1s. 6d. to 1s. 9d. per gallon.

ONCE RUN.—Buyers are offering £11 per ton in London for 1865 oil, but sellers refuse.

CRUDE.—£7 10s. to £8 per ton.

GREASE.—£5 to £16 per ton.

PARAFFIN WAX.—6d. to 1s. per lb.

DITTO SCALES.—2d. to 4d. per lb.

STRANGE BROTHERS & Co., Mold and London.

NEW YORK METAL MARKET.

(CORRECTED WEEKLY.)

COPPER	Ingot, Lake Superior, ₱ lb., cash.	.. 30¾	.. 31½
	Baltimore	.. 31	.. ..
	Pig Chili	.. ..	.. ..
	Bolts	.. 43	.. ..
	Braziers	.. 42	.. 43
	Sheathing	.. 45	.. ..
	Yellow metal	.. 32	.. ..
IRON	Pig, No. 1 Scotch, ₱ ton	45 00	49 00
	No. 1 American	48 00	50 00
	No. 2 "	45 00	46 00
	No. 2 Charcoal	.. ..	.. ..
	Bar, Swedish, ordinary sizes	170 00	.. ..
	Amer. and Eng refined	125 00	145 00
	" " common	115 00	120 00
	Rails, American currency	.. ..	.. ..
	" English gold	.. ..	.. ..
	Horse shoe iron	150 00	160 00
	Rods 5-8@3-16rd. and sq	130 50	185 00
	Band	155 00	.. ..
	Nail rods, 5-8 and 3-16	122 50	185 00
	Hoops	160 00	225 00
	Sheets, Russian, ₱ lb	.. 28	.. 30
	" English "	.. 6¼	.. 9
	" American "	.. 25	.. 25¾
	Boiler Plates, English	.. ..	.. ..
	" American	.. ..	.. ..
STEEL	Best cast in bars, war	.. 25	.. ..
	Best sheet cast, "	.. 25	.. ..
	Best cast circular saw plates 46 in	.. 31	.. ..
	Double shear steel, war	.. 25	.. ..
	Single " " "	.. 22	.. ..
	Montague & Co. C. S., in bars	.. 22	.. ..
	Round machinery cast	.. 16	.. ..
	Best German	.. 16	.. ..
	Government German	.. 13	.. ..
	Eagle German	.. 15	.. ..
	(L.) Blister, war	.. 21	.. ..
	W. Jessop & Sons, blister, war	.. 18	.. ..

	Double refined	..	26½	.. ..
	Stone Axe shapes	..	26½	.. ..
	Common blister	..	15	.. ..
	2d quality sheet	..	22	.. ..
	3d quality sheet	..	18	.. ..
LEAD	American, per 100 lbs	..	..	.. ..
	German Gold	6	80	7 00
	Spanish "	6	87½	7 00
	English "	6	87½	7 25½
	Bar, per 100 lbs	10	50	.. ..
	Pipe and sheet	10	70	.. ..
TIN	Banca Gov., per 100 lbs. gold		24½	.. ..
	Straits		22	.. ..
	English		22½	.. ..
TIN PLATES	IC 10-14 prime charcoal	15	25	.. ..
	IX 10-14 " "	18	25	.. ..
	IC 12-12 " "	15	75	.. ..
	IX 12-12 " "	18	75	.. ..
	IC 14-20 " "	16	25	.. ..
	IX 14-20 " "	19	25	.. ..
	IC 14-20 Roofing ch. 1st	15	25	.. ..
	IC 14-20 " " 2d	14	00	.. ..
	IC 14-20 " Coke	11	00	.. ..
	IC 10-14 Coke	11	00	14 50
SPELTER	Lehigh, per lb., currency	..	11½	.. ..
	Foreign " gold	..	6½	.. ..
ZINC	Mussulman & Amer	..	13½	.. ..
SOLDER	No. 1	..	24	.. ..
	No. 2	..	22	.. ..
QUICKSILVER		..	..	.. ..

SAN FRANCISCO STOCK MARKET.

Latest by Telegraph.

SAN FRANCISCO, Oct. 3.

Name.	Bid per foot.	Name.	Bid per foot.
Gould & Curry	600	Crown Point	925
Savage	1125	Yellow Jacket	725
Chollar-Potasi	120	Belcher	160
Ophir	200	Alpha	
Halo and Norcross	1600	Imperial per share	85
Cal. Steam Navigation Co	72	Cal. State Telegraph Co	33

Coal and Iron in Wales—The Mines- Steel and Iron Works.

Mr. John L. Pott, of Pottsville, Pa., writes from Nantyglo, South Wales, August 26th: "I reached this place on Monday last, and have all this week been engaged in visiting the principal iron works in this part of the country. There is a chain of large works running from this point east, in the following order, viz: Nantyglo, Ebber Vale, Tredegar, Rymney, Dowlais, and Cafarthy. From Nantyglo to Cafarthy is about 12 miles. There are other large iron works included in the above range, which we have not visited. Pendaren, Plymouth, Victoria, &c., all of which are quite extensive, and would well repay us if we could spare the time to go there. There are 14 blast furnaces belonging to the Nantyglo Works, and rolling mills to make all the produce of these furnaces into rails and bars. Everything here looks dilapidated and run down, and 50 years behind the times. It takes hard scratching to get the coal and ore, and as to iron ore, judging from specimens I have seen here, and information I have received from the boss miners, I believe we have more in Schuylkill county, and of as good a quality. The celebrated "spotted vein" (as it is called here), is only about 4 inches thick, and in the slate above it are a few scattered balls of ore, which, including the 4 inches, will give only 10 inches of solid ore, in five of mining. Of this vein of ore, and others no more favorable, most of the iron in South Wales has been made. William Kendrick has a better seam iron ore at St. Clair shaft than any I have seen in South Wales. I tried to persuade him to work it before I left home; I wish you would urge him to do so. He has a 10 inch vein which would yield 200 tons per acre if he could mine but half of it. I think the time has not come for this. You started 20 years too soon. The Ebber Vale Co. have 23 blast furnaces, 100 puddling furnaces, and about 70 heating furnaces, and manufacture 2,300 tons of rails and bars per week. It was here that Parry's experiments were made, and we saw his cupaloes and converters. Mr. Abraham Darby, the principal owner and active manager of the work, went with us, and gave us all the information we wanted. He is hopeful of the ultimate success of Parry's process, and thinks that there will be many advantages in it over Bessemer's. But notwithstanding this, he is now erecting one of the most extensive Bessmer works in the country. In fact, Bessemer's Steel Works are going up all over the country, and we have not been at a single steele work which was in operation that was not also at the same time being enlarged. This establishment is fully up to the times, and we found all the modern improvements. Here, everything looks dilapidated, as everything does at Nantyglo. We saw coal and iron ore raised within a stone's throw of the furnaces and mills. Nature has done much for the iron manufactures here, and they have availed themselves of it. When we in Schuylkill county understand and take advantage of our resources, a new era in iron-making will commence, which will make our county the great, iron-making county of the State. At Dowlais' Iron Works, there are 18 blast furnaces, 106 puddling furnaces and 86 heating furnaces. The present produce is about 2,000 tons of rails and bars per week—can make 2,500. In the rolling mills are 19 trains and 4 blooming mills. The machinery here is all first-class and looks modern. The steel works are the best conducted I have seen yet, and turn out 230 tons of steel rails per week. There are extensions of these works under way, almost completed, which will increase the yield to double what it is now. We got samples of steel rails here, and much valuable information. In fact at all the works we visited in Great Britain, we have uniformly been treated with the greatest courtesy, and have had no difficulty in getting information. We have always been candid and stated what our object was in visiting the works, and have been as candidly answered. At Cyfarthy (Car-var-ther) are 11 blast furnaces, 78 puddling furnaces, and 70 heating furnaces, 5 forge trains and 7 finishing trains. The produce is from 1,800 to 2,000 tons per week. This, for order and cleanliness, is the model mill of South Wales—probably in the world. The yards are swept clean, and the puddle bars piled in the shape of houses, and the piles, each 300 tons, set in rows like in a street. There is nothing out of place in the mills or yards, and is the very reverse of Nantyglo, which I suppose to be the dirtiest place in the world. There is an order at Dowlais for 27,000 tons of rails for Egypt, but the general complaint here is a scarcity of orders, and many mills are working on stock, as they call it—that is, piling up puddle bars, so as to be ready for large orders when they do come."

Quartz Mining in California.

"The extent to which the area of the quartz fields in our State have been enlarged since 1860, is hardly realized by the public. Prior to that time, the productive quartz belt was popularly thought to be quite narrow, and confined to a few of the central counties. Outside of the most intelligent circles, it was not supposed that we had any vein mines werth working except auriferous quartz. Subsequent explorations have revealed the fact, that the field of our vein mines is co-extensive in length and breadth with the great mountain chain of the State; that it embraces also, to a considerable extent, the lesser mountains that front the ocean, and that it includes a great variety of minerals, but especially gold, silver and copper. The width of the quartz belt in the Sierra Nevada has not been measured or carefully estimated, but it undoubtedly extends from the outer edge of the foot-hills to the summit levels, a distance varying rfom sixty to eighty miles in a direct line; while its length, from the northern to the southern border of the State is about six hundred miles. It is to be regretted that there are no statistics accessible by which to exhibit the number and extent of the lodes that have been discovered and occupied, the number of companies and mills in operation, the amount of capital invested, and the aggregate product in gold and other metals. Such statistics would, I am confident, reveal the quartz interest of California in a most extensive and prosperous condition, and it is a great fault in our legislation, that no adequate method for obtaining them has been devised. But we learn enough from the rapid multiplication of districts, from the frequently published yields in gold and copper especially, and from the repeated sales of lodes athigh figures to our own citizens, to know that vein mining in our State is rapidly taking precedence of placer mining, and establishing itself as a permanent, legitimate, safe and remunerative industry. It still has its incidental excitements and temptations to speculative overdoing, but these are not and never can be equal to the great furores created by Washoe, and are, perhaps, no more remarkable or injurious than the excitements and speculative tendencies discernible in the more sober walks of trade and commerce. Indeed, trade and mining now go almost hand in hand, for we observe that many of the heaviest investments in California quartz are made by citizens of San Francisco, who, after many losses and deceptions elsewhere, are turning with new faith and energy to the development of mineral resources at home. There are certain facts not yet mentioned, which strengthen the growing popularity of California vein mines. Many of them have been worked to a depth of many hundred feet without signs of depreciation or exhaustion. Contrary to a theory once advanced by Sir Roderick Murchison, they do not decrease in productiveness as they increase in depth, but, on the contrary, the ore streak is commonly found to widen, if it does not always grow richer; and we believe no California company has yet gone far enough to ascertain when the mere increase in the cost of working, consequent upon the increase of depth, overbalances the gross yield of a vein originally profitable. It was thought at one time, that with great depth would come an accumulation of water, involving a cost for pumping alone in excess of the gross yield, or making pumping impossible; but a majority of our mines are so situated that they can be drained by tunnels to a depth reaching many hundreds—and in numerous instances, thousands of feet. The excavation of great drain tunnels is, in nearly all the best quartz districts, thoroughly practicable, and will be successfully prosecuted whenever necessary, through a combination of interests and capital, if not as a matter of independent enterprise. The most of our vein mines are situated in close proximity to the finest timber. The gold and silver ores are usually free from base metals, and can be worked at a cost far below that required in any other mining territory on this coast. Further than this, the mountains in which they are found contain large quantities of arable land, and are finely adapted to settlement for agricultural purposes, abound in beautiful scenery, and possess a wholesome and agreeable climate. Up to an altitude of three or four thousand feet, all the products of the lower valleys can be produced, and as high as from five to eight thousand feet, in the region of deep winter snows, all the products of the northern states can be successfully grown, and permanent towns be maintained.—*San Francisco Bulletin.*

Sir Morton Peto on Our Mineral Resources.

Sir Morton Peto, the great railroad king of England, has just published a statistical work on the resources and prospects of America, in which, according to *Harper's Weekly*, he says: The mineral wealth of the United States is very great. Gold is found in some of the Eastern States, particularly in Virginia, the Carolinas, and Georgia; and the gold-producing region of the West—still very partially explored—including the states of California and Oregon, and the Territories of Utah, Nevada, New Mexico, Dacotah, Washington, Colorado, Montana and Arizona—an area of more than a million of square miles, extending from British Columbia on the north to Mexico on the south, and from the Eastern slope of the Rocky mountains to the Pacific ocean. Silver mining may be said to be only in its infancy, although in New Mexico and Arizona, which were acquired from Mexico in 1848, silver mines have long been worked. In the hands of another race, and under a better government, they will now probably soon become greatly more numerous and productive. An immense lode of silver ore, known as the Comstock Lode, has been discovered in Nevada, which is rapidly increasing in population, while new silver mines are continually being opened in different localities. Iron ore, exists in great abundance in the United States, and is widely distributed. Perhaps in no part of the world is it more abundant than in the State of Missouri, where great hills are entirely formed of it. Little, however, has yet been done to turn the iron ore of the Missouri to account. The district is deficient in coal, and the railroad system is too incomplete to supply this want. Another district, extremely rich in iron ore, but hitherto almost unproductive, lies in the northern part of Georgia, passing into Alabama. It is in Pennsylvania and New Jersey that iron ore is at present most largely worked. There are iron producing districts also in New England, New York, Ohio, Virginia, and both the Carolinas; and during the last ten years a considerable amount of capital has been invested in iron-mining in Michigan, on the southern shore of Lake Superior. But the iron-masters of America can hardly hold their ground, as yet, against competition with imported iron. The vast supplies of iron ore which America possesses are rather to be regarded as a store for future ages than as a source of wealth to be largely developed in the present. There are very rich mines of copper on the shores of Lake Superior, near Keewenaw Point, where masses of native copper of extraordinary size have been found. Copper mines have also long been wrought in New Mexico. Lead is wrought, but not to a great extent, in Missouri, Wisconsin, and Iowa. Quicksilver has been found in California, but the produce is not yet very considerable.

The coal-fields of America are the greatest in the world. They are computed to be thirty-six times the extent of those of Great Britan and Ireland. They are chiefly situated in the basin of the Mississippi and its tributaries. The whole annual produce of coal, however, does not yet amount to much more than fourteen million tons, or about one-fifth of that of Britain. Wood is the ordinary fuel for domestic purposes, and is even employed for steam-engines, while the Americans dispense with steam wherever they can avail themselves of their "water privileges." The abundance of iron, coal, and limestone in America, however, is suggestive of great expectations concerning the future, when the country shall be more densely peopled and able to make use of its own mineral treasures. Sir S. M. Peto devotes a chapter to petroleum, or rock-oil, and gives a most interesting account of the American oil-wells. The oil which flowed from oil-springs was merely collected by skimming it from the surface of water on which it floated till 1858, when a well was sunk in Pennsylvania, and at once began to yield 400, and afterward 1000 gallons a day. Great excitement ensued, and a search for oil began throughout the whole district. Many of the experiments were unsuccessful, but when oil was struck the fortunate adventurer was suddenly enriched. Some of the wells yield oil without the trouble of pumping; it flows from them in a copious stream. Some wells yield 2000 barrels, and one even 3000 barrels daily. Towns have sprung up in the oil-district of Pennsylvania: and in Oil City business is now transacted to the amount of $3,000,000 annually. Other parts of America have also been found to be rich in oil. It would be out of place here to more than merely allude to the oil wells of Canada; but there are oil-fields in several parts of Pennsylvania, in Ohio, Kentucky, and Virginia, while it is said that indications of oil have been found in many other States.

Nitro-Glycerine.

Lloyds' Salvage Association requested Capt. Grant, R.N. and Prof. Abel, Chemist Royal Arsenal Laboratory, Wolwich, to inquire into the nature, use and danger from carriage of nitro-glycerine. They reported that it is exploded by concussion, neither by friction nor fire; generally a trifling percussion is sufficient to explode it. Its explosive force is about ten times that of gunpowder. It is usually carried in tin cans holding each about 25lb. weight of the oil. It has all the appearance of ordinary oil. The cans are packed each in a wooden case for carriage. The oil is manufactured by the patentee, Mr. Nobel, of Hamburg, and by other persons abroad under his license. It is at present employed for blasting only and is extensively employed both abroad and in this country. The Committee append to their report a notice which has been issued by the Prussian Government. It says: The transport of nitro-glycerine by land or by water, especially also by rail, can therefore only be allowed under the same conditions as those referring to the transport of ignitable jars, in addition to which we issue the following orders as further means of precaution: The nitro-glycerine must be packed in bottles, made either of tin or strong glass. The bottles must be closed by a stopper of cork, not of glass. The glass bottles used for the transport of blasting oil must be cased with cork, having an inside lining of straw. These packages, tin bottles as well as the incased glass bottles, must be packed in tight wooden cases, straw, hay, or such like, to be used for packing. The cases must be marked "sprengoel" (or blasting oil) on the outside. Sending "blasting oil" by post is strictly forbidden. As the nitro-glycerine in a temperature of a few degrees above zero crystalizes, and is in this condition, according to experiment, more likely to explode, a greater amount of care is recommended during the colder season of the year. As regards the warehousing of blasting oil, the same orders have to be complied with as those applying to gunpowder and other explosive articles. Whosoever acts contrary to these orders will be fined not exceeding $10, or, if unable to pay, the offender will be punished by proportionate imprisonment.

The Properties of Nitro-Glycerine.

M. Kopp the ingenious French chemist writes: that nitro-glycerine is a yellow brownish oil, heavier than water and insoluble in water, but soluble in alcohol and ether; that prolonged exposure to only a feeble degree of cold causes it to crystallize in elongated needles; that when spread on the earth, contact with a burning body does not easily inflame it, and cannot be made to cause it to burn more than partially; that a flask-full of it may be smashed on a stone pavement without the nitro-glycerine detonating; that it may be volatilized without decomposition by a regulated heat, but cannot long undergo brisk ebullition without exploding; and that a drop made to fall on a moderately hot plate volatilizes quietly, but on a red-hot plate immediately inflames, burning like a grain of gunpowder, but without noise, and on a plate hot enough to cause the nitro-glycerine to boil immediately decomposes with a violent explosion. He adds that nitro-glycerine, especially when impure and acid, may decompose spontaneously after a time, with disengagement of gas and production of oxalic and glyceric acids, and he regards it as probable that some of the mysterious explosions of nitro-glycerine which have recently taken place may have been due to this cause. "The nitro-glycerine," he says, "being enclosed in well-stoppered bottles, and gaseous products of decomposition, not being able to escape, exert a very great pressure on the nitro-glycerine; and under these circumstances the least shock and the slightest motion may bring about an explosion." And yet, the vapor which it gives off being so poisonous, nitro-glycerine must not be kept in *open* vessels.

Patent Claims.

Interesting to Miners, Millmen, Metallurgists Oil-Men and Others.

The following claims have recently been issued from the United States Patent Office:

58,197.—DISTILLING OIL.—Samuel Andrews, Cleveland, Ohio:

I claim, 1st, The fire-chamber, C, and reverberatory chamber, F, in combination with the throat, C', and the openings, I, in the manner and for the purpose substantially as set forth.

2d, The reverberatory chamber, F, in combination with the retort, A, as and for the purpose specified.

3d, The flues, J, when separated from the walls of the retort by the wall, J', as and for the purpose set forth.

58,229.—MACHINE FOR ASSORTING POTATOES, COAL, ETC.—Mahlon D. Dickinson, Pilesgrove, N. J.:

I claim the crank-shafts, A, A, seives, B, B, suspension-rods, E, E, when combined and arranged as and for the purposes set forth

58,238.—TUYERN.—Benjamin Fish, Mechanicsburg, Pa.:

I claim, 1st, The tongued grate, B, constructed and arranged as herein described, in combination with the air-chamber, A, of the tuyere, substantially as and for the purpose set forth.

2d, The cap, E, constructed as herein described, in combination with the grate, B, substantially as and for the purpose set forth.

58,239.—METHOD OF PROMOTING COMBUSTION IN FURNACES.—Clark Fisher, Trenton, N. J.:

I claim the employment of fans, or other suitable air-engines, having pipes leading from them into the chimneys, and directed upward for the purpose of promoting the combustion of fuel in furnaces, by forcing cold air directly into the chimneys, at points which are above the heating surfaces but near the base of the chimneys, at a greater velocity than that which would result from natural draught, substantially as described.

58,299.—BORING AND PUMPING APPARATUS FOR OIL WELLS.—John B. Root, New York City. Ante-dated Sept. 10, 1866.

I claim the combination of the horizontally movable direct-action steam-engine, the horizontal platform and guides on the derrick, and the boring bar or drill-rod and pump, substantially as and for the purpose herein specified.

58,335.—AMALGAMATOR.—S. Frederick Charles, assignor to himself and J. E. Russell, Dahlonega, Ga.:

I claim, 1st, The so combining a panning machine, a re-grinding machine, and an amalgamator, that the gold shall be thoroughly extracted by the continuous action of all of them, substantially as set forth.

2d, The adjustable partition, B, constructed and operated substantially and for the purposes set forth.

3d, The deep radiating channels, j, in the lower surface of the grinder, K.

4th, The combination of an upper revolving grinder with an oscillating lower one, constructed and operating substantially as specified.

5th, The case or shell, M, of the grinders, in combination with the rollers, i, and the reciprocating arm or lever, O.

6th, The amalgamator, R, constructed so as to form one large and one narrow compartment by the insertion of the removable and adjustable partition, o, substantially as specified.

7th, The revolving frame provided with amalgamating pans, suspended below the surface of the auriferous mass, constructed and operating substantially as and for the purposes specified.

8th, The location of the flue below the series of amalgamators, substantially as and for the purposes specified.

58,360.—PUMP.—Louis Drescher, assignor to Gustavus Meyer, Matanzas, Cuba.:

I claim the cup-shaped pistons, B, with packing disks, f, in combination with spring disks, g, applied and operating substantially as and for the purpose set forth.

Special Scientific Brevities.

☞ M. D'Archiac recently laid before the Academy of Sciences the remains of a fossil reptile found by M. Frossard, in the bituminous shistus of Muse, near Autun, Saone-et-Loire. From M. Frossard's notes concerning the site where the reptile was found it appears that there were together with it some fish, cycoliths and plants at a depth of two metres below a quarternary deposit, in a stratum of bituminous schistus of a thickness of from five to six metres, two and a half of which are now being worked for the manufacture of mineral oil. The new reptile belongs to Mr. Owen's *Ganocephali*, strange vertrebrate, with uncertain characteristics, seemingly representing the embryo age of reptiles, just as the *Ganords*, with vertebra incompletely ossified, represent the embryo age of fishes. The new fossil is to be called Actinodon.

☞ There is at present on one of the lakes of the Bois de Boulogne a boat that moves about without either steam, oars, sails, or any other visible means of propulsion. The power employed is that of electricity, which, by an ingenious contrivance, communicates a rotary motion to a pair of paddle-wheels. The experiment is curious enough, but, unfortunately, the principle cannot as yet receive a practical application, because it would not pay. An electric pile consumes just as many kilogrammes of zinc per hour and per horse-power as a steam-engine consumes kilogrammes of coal, so that the electric system would be about thirty times dearer than steam.

☞ The most powerful microscope ever made has been constructed by Messrs. Powell & Lealand, and described in a paper recently read before the Royal Society of London. The power of this instrument is fully double that of any which had ever been constructed previously; and it altogether supersedes what had before been considered the utmost attainable limit of perfection in this instrument. This microscope magnifies 3,000 diameters with its lowest eye-piece, and 15,000 diameters with its highest; the latter being equivalent to making an object appear 1,575,000,000 times larger than it really is!

☞ A process by which the gas used in every household can be manufactured in the kitchen, has been patented by Mr. Russell, in England, who claims that with a refuse vegetable substance, readily obtainable, he can produce gas of double the illuminating power of that now supplied by gas-companies, and at half the price. The kitchen range is to contain the retorts, and the manufacture of the gas, which is pure, white, and brilliant, goes on without attention. The residuum obtained by the process is readily saleable at a good price.

☞ M. Memorski, of Vienna, confirms M. Brucke's observations, that diffused solar light, instead of being perfectly white, is tinged with red, just as the flames of gas or lamps are tinged with yellow. Diffused light received at noon through a cloudy sky deviates by one twenty-second part of the chromatic circle from the extreme red of the spectrum towards the violet. The light of burning magnesium, which appears to be so like sunlight, has also a tinge of violet.

☞ A chain was cast by a German workman at the Hayle Foundry, which contained 180 links, and weighed a little more than 1½ oz. Its length was 5 feet.

☞ The bells of the Paris ornamental clocks are composed of 72 parts by weight of copper, 28·55 of tin, and 1·44 of iron.

Mineral and other On-dits.

☞ The copper districts of the United States, east of Rocky Mountains, to which attention has been attracted, other than those of Lake Superior, are as follows: Virginia, upon the Blue Ridge range, in Carroll, Floyd, and Grayson Counties; North Carolina, Guilford County, etc.; Tennessee, Polk County; Georgia, along the line of Gilmer County; New Jersey, Schuylor mine of Belleville; Connecticut, Bristol mine. Most of these mines have been abandoned; those of Virginia, Tennessee, Georgia and Connecticut were, at one time, vigorously worked; the Eureka and other companies of Georgia and Tennessee have, at times, yielded a profit to their stockholders.

☞ The increased quantity of coal thrown into market this year over the supply of 1864, which was the largest quantity sent to market in a single year in the history of the trade, is upwards of two millions seven hundred thousand tons.

☞ A letter from Leavenworth, Kansas, says that shafts are being sunk throughout the State for coal, the surveys made by prominent geologists warranting the efforts made. Coal has been discovered in large quantities upon the prairies and within a radius of ten miles from Leavenworth, but there are parties who are now engaged in boring for coal within the city proper, and a shaft has been sunk five hundred feet, and their prospects improve the deeper they get.

☞ Recently at Lynn, Mass., a lady observed a "shooting star." Following the course of the erratic messenger, she witnessed its descent directly beneath her window upon the grass. On approaching the spot, Mrs. C., discovered a white substance, and, upon touching it, found it to be hot, and smelling strongly of sulphur. It was sent to Boston, and submitted to Dr. Jackson, who pronounced it a very fine specimen of an aerolite.

☞ They gravely now consult about
Great Britain's coal fields running out,
And depreciate the evil hour—
As coal makes iron—iron power.
No matter, when arrives the day,
They can get lots of coal this way.

☞ The United States Sub-Treasurer, of San Francisco, has sent hither for Government account, since January last, $8,000,000—which figures are not embraced in the specie exports on mercantile account.

☞ Prof. Agassiz says that the strip of highlands which divides the waters flowing into the St. Lawrence from these flowing into the Atlantic, is the oldest land in the world. It was once a lonely sea beach, washed by a universal ocean.

☞ Commissioner Ruggles states that the West will be well represented in the Paris Exhibition. The minerals of the Mississippi Valley, and the soils thereof, will be in abundance

☞ It is reported that the gold mines in Plymouth, Vermont, are soon to be re-opened.

All Sorts.

☞ Sidney E. Morse, of this city, has just patented a philosophical instrument, which is called a bathometer. You throw it overboard, with its appendages, in the ocean, where water is miles deep. It goes down like a shot, and as soon as it touches the bottom it turns and comes back to the surface. You pick it up, and the true depth of the water where it struck the bottom is seen on the scale of the bathometer, just as you see the degree of heat on the thermometer.

☞ Amongst the curiosities which are to figure in the Exhibition of 1867, the *Evenement* mentions a guillotine on a new model, invented by a Prussian, capable of cutting off six heads, and even eight on an emergency, simultaneously. The blade is put in motion by a beam adapted to a powerful steam engine, and is suspended so as not to fall vertically on the neck, but to cut off the head by a circular and rotary motion.

☞ The Union Pacific Railroad in California as being built eastward over the Sierra Nevadas, has grades of from one hundred to one hundred and sixteen feet to the mile, and curves of five degrees. Yet a San Francisco built engine has made thirty-five miles per hour over it, running toward the summit of the mountains and drawing a train of cars. So says the *Mining Press*.

☞ The consumption of horseflesh in Paris increases rapidly. It is scarcely two months since the sale of this new kind of food was officially authorised, and already a second special butcher's shop has been opened in Paris. At another part an establishment for boiled horse-flesh and soup has been opened, and a manufactory of horse-flesh sausages will soon be opened.

☞ It is reported that the French Government has decided on a new rifle, firing eighteen rounds a minute, and that 200,000 are to be manufactured just to see how they answer. An American showed his system to the Emperor a few days ago, who thought it pretty, but said his guns would in future decide battles.

☞ A New Hampshire hen, since Jan. 20th, 1866, has laid nine dozen eggs, and brought up two broods of chickens; the last brood being now two months old, are weaned, and the hen commenced her tenth dozen of eggs. The first brood was marketed when four months old, averaging $1 27 a piece.

☞ "Mohammed, in one of his visions, says the Koran, saw an angel in the third heaven so large that his eyes were seventy days' journey apart." What an awful bridge he must have had to his nose!

☞ Gardeners mind their peas, actors mind their cues, but church-wardens, instead of minding their "p's" and "q's," very often give all their attention to their pews and keys.

☞ Two sisters lately met in Baltimore after forty-eight years' separation. They talked thirty-six hours, and were still talking at last accounts.

☞ A dancing-master has introduced a new sensation—"The Kiss Cotillon." In it the gentlemen kiss the ladies as they "swing corners."

☞ The difference between a girl who tears her dress, and one who "pads" is that one busts her stuff, and the other stuffs her bust.

☞ "Sambo, "whars de hoe?" "Wid de rake." "Whars de rake?" "Wid de hoe." "Whars dey both?" "Dey both together."

SPECIAL NOTICE.

RYLANDS' IRON TRADE CIRCULAR.—The right of publication of the *Iron Trade Circular* (*Ryland's*), with the copyright and goodwill, was sold by auction at the Hen and Chickens Hotel, Birmingham, yesterday, by Mr. H. Smith, under an order of the High Court of Chancery, made in a cause, "Ryland vs. Holt and others." The first bid was £100, and after a spirited competition it was knocked down for £630. Mr. George Ryland, one of the partners in the late firm, was the purchaser.—*Times*.

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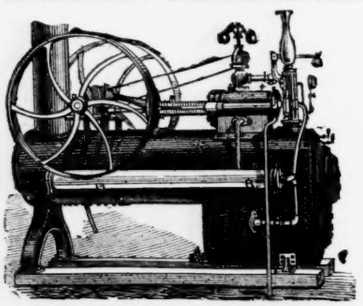

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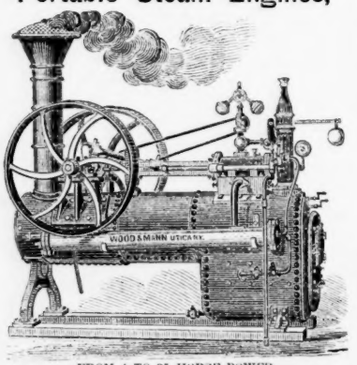

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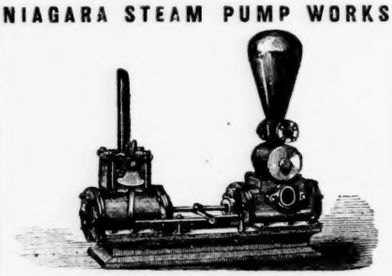

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